



Formosa Plastics®

Formosa Plastics Corporation, Texas  
201 Formosa Drive • P.O. Box 700  
Point Comfort, TX 77978  
Telephone: 361-987-7000

October 30, 2018

Certified Mail: 7018 0360 0000 5327 8767  
Air Section Manager, Region 14  
Texas Commission Environmental Quality  
6300 Ocean Drive, Suite 1200  
Corpus Christi, Texas 78412

RE: Formosa Plastics Corporation, Texas  
TCEQ Air Quality Account No. CB-0038-Q  
Third Quarter 2018 SUMMA Canister Report

Dear Air Section Manager:

Per your request, we have enclosed a quarterly summary of results from the Point Comfort SUMMA Canister Monitoring System. The third quarter of 2018 results are shown for each site on the attached tables. Additionally, we have included wind roses generated by the weather sensor on the FTIR or wind direction data from other air monitoring devices for each SUMMA canister sampling date during the third quarter of 2018.

Beginning with the first sample date in the fourth quarter 2003, we have also included average wind speed and wind direction on the tables. This was done at the request of Mr. David Carmichael of the TCEQ Austin office. In addition, at the request of Mr. Carmichael, the following changes have been made to the tables:

The duplicate sample data for all compounds has been removed from the VOC Canister Analysis Tables;

The averaged duplicate sample data was replaced with only the routine sample data in the VOC Canister Analysis Tables; and

An additional VOC Canister Analysis Table was created for the duplicate samples data. This was done so that the relative percent difference (RPD) could be calculated. The calculation for obtaining the RPD is shown in the Duplicate Sample section of the attached Calculation Methodology.

During a telephone conversation with Mr. Vincent Leopold (TCEQ TARA Group) on April 9, 1998, he requested a disk copy of the SUMMA Canister sampling results be included with the quarterly report. Enclosed is an electronic copy of the third quarter 2018 SUMMA Canister Report.

October 30, 2018

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Should you have any questions please contact Vanessa Peppers by e-mail at [VanessaP@ftpc.fpcusa.com](mailto:VanessaP@ftpc.fpcusa.com).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Rick Crabtree'.

Rick Crabtree  
Vice President/General Manager  
Formosa Plastics Corporation, Texas

Attachments

October 30, 2018

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cc: Dr. Tracie Phillips  
Toxicology Division  
Texas Commission on Environmental Quality  
P. O. Box 13087  
Austin, Texas 78711-3087

Certified Mail: 7018 0360 0000 5327 8682

# FORMOSA PLASTICS CORPORATION, TEXAS

## SUMMA CANISTER QUARTERLY REPORT

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### CALCULATION METHODOLOGY

Following is the calculation methodologies used to calculate the Year-To-Date Sum and Year-To-Date Average for the four SUMMA canister sampling sites. Please note, there are two columns associated with each component analyzed. The column titled "Actual" represents the results reported by the independent laboratory contracted to analyze the SUMMA canisters. The column titled "½ Reported LOD (Limit of Detection)" represents either the actual result or one-half the limit of detection reported by the laboratory, as appropriate.

#### ACTUAL

The following is entered into the column titled "Actual":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to date average;

ND (Non Detect) - As reported by the laboratory. The value of "0" is used to calculate the year to date sum and the year-to-date average;

BDL (Below Detection Limit) - Entered when the actual result is less than the reported limit of detection. The value of "0" is used to calculate the year-to-date sum and the year-to-date average;

"\*" - Non operational sampling period.

#### ½ REPORTED LOD (LIMIT OF DETECTION)

The following is entered into the column titled "½ Reported LOD":

Numerical Value - Actual results reported by the independent laboratory when the result is equal to or greater than the limit of detection. The numerical value is used to calculate the year-to-date sum and the year-to-date average;

½ the Reported Limit of Detection - ½ the reported limit of detection when the results are reported as non-detect and when the actual result is below the detection limit (BDL). ½ the reported limit of detection is used to calculate the year-to-date sum and the year-to-date average.

"\*" - Non operational sampling period.



## **FORMOSA PLASTICS CORPORATION, TEXAS**

### **SUMMA CANISTER QUARTERLY REPORT**

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Limit of Detection (LOD) - Method Detection Limit, Limit of Detection, Reporting Limit, etc... as reported by the independent laboratory conducting the analysis.

#### **DUPLICATE SAMPLES**

Beginning with the revised First Quarter 2004 Report, submitted on October 22, 2004, the duplicate samples will be reported discreetly on a separate VOC Canister Analysis Table. This is done so that the duplicate samples can be compared to the routine samples and the Relative Percent Difference (RPD) can be calculated. The RPD is calculated using the following equation:

$$\{(X1-X2) / [(X1+X2) / 2]\} \times 100$$

Mr. David Carmichael provided this equation in his August 20, 2004 e-mail request for changes. Where the duplicate and routine sample indicated "ND", the RPD is reported as "ND". Where the duplicate or routine sample indicated "ND" and the other indicated a concentration greater than ND, the RPD is calculated by using the value entered in the actual concentration column and the value entered in the ½ Reported LOD column.

#### **YEAR-TO-DATE SUM**

The year-to-date sum is calculated by taking the sum of all values entered in the column.

#### **YEAR-TO-DATE AVERAGE**

The following formula is used to calculate the year-to-date average:

Year-To-Date Sum / (Number of theoretical sample periods - Number of non operational sample periods)

**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - CITY HALL SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/3/2017	83	6.2	ND	0.0500	ND	0.1250	ND	0.0500	1.6900	1.6900	2.5200	2.5200
10/9/2017	130	6.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
10/15/2017	241	4.6	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.3840	0.3840
10/21/2017	115	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
10/27/2017	224	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/2/2017	153	5.6	*	*	*	*	*	*	*	*	*	*
11/8/2017	222	7.9	ND	0.0500	ND	0.1250	ND	0.0500	0.9010	0.9010	ND	0.0500
11/14/2017	89	5.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/20/2017	72	4.3	ND	0.0500	ND	0.1250	ND	0.0500	0.1940	0.1940	0.5530	0.5530
11/26/2017	103	2.6	ND	0.0500	ND	0.1250	ND	0.0500	0.3960	0.3960	0.8240	0.8240
12/2/2017	97	4.1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
12/8/2017	257	3.5	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
12/14/2017	218	2.2	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
12/18/2017	128	2.2	*	*	*	*	*	*	ND	0.0500	0.1300	0.1300
12/26/2017	196	4.1	*	*	*	*	*	*	*	*	*	*
1/1/2018	71	5.0	*	*	*	*	*	*	*	*	*	*
1/11/2018	202	8.9	*	*	*	*	*	*	*	*	*	*
1/17/2018	311	4.2	*	*	*	*	*	*	*	*	*	*
1/23/2018	275	4.0	*	*	*	*	*	*	*	*	*	*
1/29/2018	341	5.6	*	*	*	*	*	*	*	*	*	*
2/4/2018	197	5.2	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1070	0.1070
2/10/2018	218	3.8	ND	0.0500	ND	0.1250	ND	0.0500	0.6680	0.6680	ND	0.0500
2/16/2018	147	5.1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	1.7000	1.7000
2/22/2018	315	6.2	*	*	*	*	*	*	*	*	*	*
2/28/2018	145	10.1	ND	0.0500	0.377	0.3770	1.6500	1.6500	ND	0.0500	ND	0.0500
3/6/2018	211	8.3	ND	0.0500	ND	0.1250	0.8420	0.8420	0.4750	0.4750	0.2470	0.2470
3/12/2018	279	7.4	ND	0.0500	ND	0.1250	0.5510	0.5510	0.6320	0.6320	ND	0.0500
3/18/2018	125	5.4	ND	0.0500	ND	0.1250	0.1690	0.1690	ND	0.0500	ND	0.0500
3/24/2018	146	7.7	ND	0.0500	ND	0.1250	0.2300	0.2300	ND	0.0500	ND	0.0500
3/30/2018	126	7.1	ND	0.0500	ND	0.1250	0.4860	0.4860	0.4690	0.4690	ND	0.1390
4/5/2018	96	5.6	ND	0.0500	ND	0.1250	0.1990	0.1990	ND	0.0500	0.1160	0.1160
4/11/2018	114	4.4	ND	0.0500	ND	0.1250	0.3390	0.3390	0.1510	0.1510	0.1730	0.1730
4/17/2018	144	9.7	ND	0.0500	ND	0.1250	0.3190	0.3190	ND	0.0500	ND	0.0500
4/23/2018	243	1.2	ND	0.0500	ND	0.1250	0.2270	0.2270	2.5900	2.5900	0.8170	0.8170
4/29/2018	106	5.5	ND	0.0500	ND	0.1250	0.1580	0.1580	ND	0.0500	ND	0.0500
5/5/2018	320	3.5	ND	0.0500	ND	0.1250	0.4130	0.4130	0.9900	0.9900	0.2730	0.2730
5/11/2018	122	9.1	ND	0.0500	ND	0.1250	0.1340	0.1340	ND	0.0500	ND	0.0500
5/17/2018	199	6.0	ND	0.0500	ND	0.1250	0.1250	0.1250	ND	0.0500	ND	0.0500
5/23/2018	96	5.2	*	*	*	*	*	*	*	*	*	*
5/29/2018	144	5.2	ND	0.0500	ND	0.1250	0.1680	0.1680	ND	0.0500	0.1630	0.1630
6/4/2018	169	4.4	ND	0.0500	ND	0.1250	0.1800	0.1800	0.1090	0.1090	0.1030	0.1030
6/10/2018	140	8.8	ND	0.0500	ND	0.1250	0.1750	0.1750	ND	0.0500	ND	0.0500
6/16/2018	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
6/22/2018	151	4.9	ND	0.0500	ND	0.1250	0.2280	0.2280	ND	0.0500	0.1380	0.1380
6/28/2018	143	7.0	ND	0.0500	ND	0.1250	0.2150	0.2150	ND	0.0500	ND	0.0500
7/4/2018	126	7.1	ND	0.0500	ND	0.1250	0.1020	0.1020	0.8600	0.8600	6.1100	6.1100
7/10/2018	121	4.6	ND	0.0500	ND	0.1250	0.3820	0.3820	ND	0.0500	ND	0.0500
7/16/2018	153	5.9	ND	0.0500	ND	0.1250	0.2210	0.2210	ND	0.0500	0.1760	0.1760
7/22/2018	176	5.7	ND	0.0500	ND	0.1250	0.1850	0.1850	ND	0.0500	0.1990	0.1990
7/28/2018	133	4.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
8/3/2018	107	4.1	ND	0.0500	ND	0.1250	0.3830	0.3830	0.6580	0.6580	0.7690	0.7690



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - CITY HALL SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
8/9/2018	138	5.6	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
8/17/2018	135	6.0	ND	0.0500	ND	0.1250	0.2890	0.2890	ND	0.0500	ND	0.0500
8/21/2018	155	5.4	ND	0.0500	ND	0.1250	0.1220	0.1220	ND	0.0500	ND	0.0500
8/29/2018	121	4.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.1020
9/6/2018	91	1.8	ND	0.0500	ND	0.1250	0.1930	0.1930	0.7720	0.7720	0.9860	0.9860
9/12/2018	60	4.6	ND	0.0500	ND	0.1250	0.1530	0.1530	ND	0.0500	0.1100	0.1100
9/18/2018	187	1.3	*	*	*	*	*	*	*	*	*	*
9/24/2018	115	4.5	ND	0.0500	ND	0.1250	0.1490	0.1490	ND	0.0500	ND	0.0500
9/30/2018	67	3.3	ND	0.0500	ND	0.1250	0.5390	0.5390	2.3200	2.3200	1.2400	1.2400

	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
Year-To-Date Sum	0.0000	2.4500	0.3770	6.3770	13.3850	13.6850	13.8750	15.5250	18.0790	19.3290
Rolling Year Average	0.0000	0.0500	0.0077	0.1301	0.2732	0.2793	0.2832	0.3168	0.3690	0.3945
Annual Average	0.0000	0.0500	0.0000	0.1250	0.2000	0.2074	0.3130	0.3481	0.4207	0.4448

Number of theoretical sample periods

Number of non operational sample periods

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Monitoring Comparison Values (ppb)				Investigation
Chemical	ST	LT	Limit (ppb)	
Vinyl Chloride	27,000	0.47	25	
Ethylene Dichloride	94	0.72	29.7	
Benzene	180	1.4	28.2	
Ethylene	500,000	30	500	
1,3 Butadiene	1,700	9	25	

**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - CITY HALL**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/21/17	115	6.0	ND	0.0500	ND	0.1250	0.1080	0.0500	ND	0.0500	ND	0.0500
10/23/17 <sub>a</sub>	115	6.0	ND	0.0500	ND	0.1250	0.1160	0.1160	ND	0.0500	0.1460	0.1460
Relative Percent Difference (RPD)			ND		ND		-7.1429		ND		-97.9592	
12/02/17	97	4.1	ND	0.0500	ND	0.1250	0.2570	0.2570	ND	0.0500	ND	0.0500
12/02/17 <sub>a</sub>	97	4.1	ND	0.0500	ND	0.1250	0.2820	0.2820	0.1390	0.1390	0.1280	0.1280
Relative Percent Difference (RPD)			ND		ND		-9.2764		-94.1799		-87.6404	
02/10/18	94	5.4	ND	0.0500	ND	0.1250	0.8060	0.8060	0.6680	0.6680	ND	0.0500
02/10/18 <sub>a</sub>	94	5.4	ND	0.0500	ND	0.1250	1.1600	1.1600	0.8460	0.8460	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-36.0122		-23.5139		ND	
03/12/18	279	7.4	ND	0.0500	ND	0.1250	0.5510	0.5510	0.6320	0.6320	ND	0.0500
03/12/18 <sub>a</sub>	279	7.4	ND	0.0500	ND	0.1250	0.4600	0.4600	0.5360	0.5360	0.1140	0.1140
Relative Percent Difference (RPD)			ND		ND		18.0020		16.4384		-78.0488	
03/24/18	146	7.7	ND	0.0500	ND	0.1250	0.2300	0.2300	ND	0.0500	ND	0.0500
03/24/18 <sub>a</sub>	146	7.7	ND	0.0500	ND	0.1250	0.2310	0.2310	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-0.4338		ND		ND	
05/05/18	320	3.5	ND	0.0500	ND	0.1250	0.4130	0.4130	0.9900	0.9900	0.2730	0.2730
05/05/18 <sub>a</sub>	320	3.5	ND	0.0500	ND	0.1250	0.3700	0.3700	1.2000	1.2000	0.1500	0.1500
Relative Percent Difference (RPD)			ND		ND		10.9834		-19.1781		58.1560	
06/16/18	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
06/16/18 <sub>a</sub>	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		ND		ND		ND	
07/16/18	153	5.9	ND	0.0500	ND	0.1250	0.2210	0.2210	ND	0.0500	0.1760	0.1760
07/16/18 <sub>a</sub>	153	5.9	ND	0.0500	ND	0.1250	0.2380	0.2380	ND	0.0500	0.1720	0.1720
Relative Percent Difference (RPD)			ND		ND		-7.4074		ND		2.2989	
09/30/18	65	2.2	ND	0.0500	ND	0.1250	0.5390	0.5390	2.3200	2.3200	1.2400	1.2400
09/30/18 <sub>a</sub>	65	2.2	ND	0.0500	ND	0.1250	0.5620	0.5620	2.3100	2.3100	1.1400	1.1400
Relative Percent Difference (RPD)			ND		ND		-4.1780		0.4320		8.4034	

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available



# FORMOSA VOC CANISTER ANALYSIS

## 3rd QUARTER 2018

### POINT COMFORT - FORMOSA TRAINING COMPLEX

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/3/2017	83	6.2	0.1860	0.1860	ND	0.1250	0.1510	0.1510	0.5030	0.5030	0.2510	0.2510
10/9/2017	130	6.3	*	*	*	*	*	*	*	*	*	*
10/15/2017	241	4.6	*	*	*	*	*	*	*	*	*	*
10/21/2017	115	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
10/27/2017	224	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/2/2017	153	5.6	*	*	*	*	*	*	*	*	*	*
11/8/2017	222	7.9	ND	0.0500	2.16	2.1600	0.1490	0.1490	0.8870	0.8870	ND	0.0500
11/14/2017	89	5.0	ND	0.0500	2.26	2.2600	0.2220	0.2220	ND	0.0500	ND	0.0500
11/20/2017	72	4.3	ND	0.0500	ND	0.1250	0.3340	0.3340	0.1940	0.1940	ND	0.0500
11/26/2017	103	2.6	ND	0.0500	ND	0.1250	0.4850	0.4850	0.9200	0.9200	0.5530	0.5530
12/2/2017	97	4.1	ND	0.0500	ND	0.1250	0.2600	0.2600	0.1220	0.1220	1.4800	1.4800
12/8/2017	257	3.5	ND	0.0500	ND	0.1250	0.1340	0.1340	ND	0.0500	0.2410	0.2410
12/14/2017	218	2.2	ND	0.0500	ND	0.1250	0.2170	0.2170	0.7390	0.7390	ND	0.0500
12/18/2017	128	2.2	ND	0.0500	ND	0.1250	0.2340	0.2340	ND	0.0500	0.1380	0.1380
12/26/2017	196	4.1	*	*	*	*	*	*	*	*	*	*
1/5/2018	71	5.0	*	*	*	*	*	*	*	*	*	*
1/11/2018	202	8.9	*	*	*	*	*	*	*	*	*	*
1/17/2018	311	4.2	*	*	*	*	*	*	*	*	*	*
1/23/2018	275	4.0	ND	0.0500	ND	0.1250	0.5740	0.5740	0.6610	0.6610	ND	0.0500
1/29/2018	341	5.6	ND	0.0500	ND	0.1250	0.1420	0.1420	ND	0.0500	ND	0.0500
2/4/2018	197	5.2	ND	0.0500	ND	0.1250	0.4520	0.4520	0.2290	0.2290	0.1430	0.1430
2/10/2018	218	3.8	ND	0.0500	ND	0.1250	0.5940	0.5940	0.8710	0.8710	ND	0.0500
2/16/2018	147	5.1	ND	0.0500	ND	0.1250	0.1250	0.1250	ND	0.0500	2.9300	2.9300
2/22/2018	315	6.2	*	*	*	*	*	*	*	*	*	*
2/28/2018	145	10.1	ND	0.0500	0.371	0.3710	1.8500	1.8500	ND	0.0500	0.1300	0.1300
3/6/2018	211	8.3	ND	0.0500	ND	0.1250	0.9270	0.9270	1.5500	1.5500	0.2600	0.2600
3/12/2018	279	7.4	ND	0.0500	ND	0.1250	0.4440	0.4440	0.1130	0.1130	ND	0.0500
3/18/2018	125	5.4	ND	0.0500	ND	0.1250	0.2360	0.2360	ND	0.0500	ND	0.0500
3/24/2018	146	7.7	ND	0.0500	ND	0.1250	0.2090	0.2090	ND	0.0500	0.1270	0.1270
3/30/2018	126	7.1	ND	0.0500	ND	0.1250	0.5750	0.5750	0.6040	0.6040	ND	0.0500
4/5/2018	96	5.6	ND	0.0500	ND	0.1250	0.2700	0.2700	0.3370	0.3370	0.3560	0.3560
4/11/2018	114	4.4	ND	0.0500	ND	0.1250	0.3620	0.3620	0.4940	0.4940	0.5740	0.5740
4/17/2018	144	9.7	ND	0.0500	ND	0.1250	0.1690	0.1690	ND	0.0500	0.1270	0.1270
4/23/2018	243	1.2	ND	0.0500	ND	0.1250	0.3330	0.3330	1.3800	1.3800	0.3610	0.3610
4/29/2018	106	5.5	ND	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	ND	0.0500
5/5/2018	320	3.5	ND	0.0500	ND	0.1250	0.1030	0.1030	ND	0.0500	ND	0.0500
5/11/2018	122	9.1	ND	0.0500	ND	0.1250	0.1170	0.1170	ND	0.0500	ND	0.0500
5/17/2018	159	6.0	ND	0.0500	ND	0.1250	0.1250	0.1250	ND	0.0500	ND	0.0500
5/23/2018	96	5.2	*	*	*	*	*	*	*	*	*	*
5/29/2018	144	5.2	ND	0.0500	ND	0.1250	0.1380	0.1380	ND	0.0500	0.1160	0.1160
6/4/2018	169	4.4	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1160	0.1160
6/10/2018	140	8.8	ND	0.0500	ND	0.1250	0.1450	0.1450	ND	0.0500	0.3220	0.3220
6/16/2018	114	8.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
6/22/2018	151	4.9	ND	0.0500	ND	0.1250	0.1790	0.1790	ND	0.0500	0.1930	0.1930
6/28/2018	143	7.0	ND	0.0500	ND	0.1250	0.1490	0.1490	ND	0.0500	0.3960	0.3960
7/4/2018	126	7.1	*	*	*	*	*	*	*	*	*	*
7/10/2018	121	4.6	ND	0.0500	ND	0.1250	0.2370	0.2370	ND	0.0500	ND	0.0500
7/16/2018	153	5.9	ND	0.0500	ND	0.1250	0.2580	0.2580	ND	0.0500	0.1030	0.1030
7/22/2018	176	5.7	ND	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	0.1330	0.1330
7/28/2018	133	4.0	ND	0.0500	ND	0.1250	0.1810	0.1810	ND	0.0500	ND	0.0500
8/3/2018	107	4.1	ND	0.0500	ND	0.1250	0.2720	0.2720	1.6000	1.6000	0.1470	0.1470
8/9/2018	138	5.6	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1350	0.1350

# FORMOSA VOC CANISTER ANALYSIS

## 3rd QUARTER 2018

### POINT COMFORT - FORMOSA TRAINING COMPLEX

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
8/17/2018	135	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.2690	0.2690
8/21/2018	155	5.4	ND	0.0500	ND	0.1250	0.1340	0.1340	ND	0.0500	ND	0.0500
8/29/2018	121	4.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1020	0.1020
9/6/2018	91	1.8	ND	0.0500	ND	0.1250	0.3340	0.3340	0.7480	0.7480	1.2500	1.2500
9/12/2018	60	4.6	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1140	0.1140
9/18/2018	187	1.3	*	*	*	*	*	*	*	*	*	*
9/24/2018	115	4.5	ND	0.0500	ND	0.1250	0.1860	0.1860	ND	0.0500	ND	0.0500
9/30/2018	67	3.3	ND	0.0500	ND	0.1250	0.6890	0.6890	2.7400	2.7400	2.2600	2.2600

	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
Year-To-Date Sum	0.1860	2.5860	4.7910	10.5410	12.9220	13.3220	14.6920	16.2420	13.3270	14.3770
Rolling Year Average	0.0038	0.0528	0.0978	0.2151	0.2637	0.2719	0.2998	0.3315	0.2720	0.2934
Annual Average	0.0000	0.0500	0.0000	0.1250	0.1661	0.1776	0.2678	0.3082	0.2584	0.2757

Number of theoretical sample periods

Number of non operational sample periods

60

11

60

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11

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCFQ Air Monitoring Comparison Values (ppb)			Investigation Limit (ppb)
Chemical	ST	L.T.	
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	500
1,3 Butadiene	1,700	9	25



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - FORMOSA TRAINING COMPLEX**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/27/17	224	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
10/27/17d	224	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
11/08/17	222	7.9	ND	0.0500	2.1600	2.1600	0.1490	0.1490	0.8870	0.8870	ND	0.0500
11/08/17d	222	7.9	ND	0.0500	ND	0.1250	0.1590	0.1590	0.7850	0.7850	ND	0.0500
Relative Percent Difference (RPD)			ND									
12/08/17	257	3.5	ND	0.0500	ND	0.1250	0.1340	0.1340	ND	0.0500	ND	0.0500
12/08/17d	257	3.5	ND	0.0500	ND	0.1250	0.1950	0.1950	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
02/04/18	197	5.2	ND	0.0500	ND	0.1250	0.4520	0.4520	0.2290	0.2290	0.1430	0.1430
02/04/18d	197	5.2	ND	0.0500	ND	0.1250	0.8140	0.8140	0.3260	0.3260	0.2240	0.2240
Relative Percent Difference (RPD)			ND									
03/06/18	211	8.3	ND	0.0500	ND	0.1250	0.9270	0.9270	1.5500	1.5500	0.2600	0.2600
03/06/18d	211	8.3	ND	0.0500	ND	0.1250	0.9640	0.9640	1.6900	1.6900	0.2860	0.2860
Relative Percent Difference (RPD)			ND									
07/22/18	176	5.7	ND	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	0.1330	0.1330
07/22/18d	176	5.7	ND	0.0500	ND	0.1250	0.1190	0.1190	ND	0.0500	0.1490	0.1490
Relative Percent Difference (RPD)			ND									
08/09/18	138	5.6	ND	0.0500	ND	0.1250	ND	ND	ND	ND	ND	ND
08/09/18d	138	5.6	ND	0.0500	ND	0.1250	ND	ND	ND	ND	0.1350	0.1350
Relative Percent Difference (RPD)			ND									
09/12/18	60	4.6	ND	0.0500	ND	0.1250	ND	ND	ND	ND	0.1140	0.1140
09/12/18d	60	4.6	ND	0.0500	ND	0.1250	ND	ND	ND	ND	0.1130	0.1130
Relative Percent Difference (RPD)			ND									
-44.1417												
-9.5238												
-8.6420												
-11.3475												
-25.8065												
0.8811												



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - PARK SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/3/2017	83	6.2	ND	0.0500	ND	0.1250	ND	0.1320	ND	0.0500	ND	0.0500
10/9/2017	130	6.3	ND	0.0500	ND	0.1250	ND	0.4140	ND	0.0500	2.4900	2.4900
10/15/2017	241	4.6	ND	0.0500	ND	0.1250	ND	0.1910	ND	0.0500	0.1550	0.1550
10/21/2017	115	6.0	ND	0.0500	ND	0.1250	ND	0.3020	ND	0.0500	ND	0.0500
10/27/2017	224	6.0	ND	0.0500	ND	0.1250	ND	0.2750	ND	0.0500	ND	0.0500
11/2/2017	153	5.6	*	*	*	*	*	*	*	*	*	*
11/8/2017	222	7.9	ND	0.0500	ND	0.1250	ND	0.1320	ND	0.0500	ND	0.0500
11/14/2017	89	5.0	ND	0.0500	ND	0.1250	ND	0.4140	ND	0.0500	ND	0.0500
11/20/2017	72	4.3	ND	0.0500	ND	0.1250	ND	0.1910	ND	0.0500	1.5000	1.5000
11/26/2017	103	2.6	ND	0.1000	ND	0.2500	ND	0.3020	ND	1.8100	1.7600	1.7600
12/2/2017	97	4.1	ND	0.0500	ND	0.1250	ND	0.2750	ND	0.2740	0.5950	0.5950
12/8/2017	257	3.5	ND	0.0500	ND	0.1250	ND	0.2270	ND	0.0500	ND	0.0500
12/14/2017	218	2.2	ND	0.0500	ND	0.1250	ND	0.3610	ND	0.9360	0.2810	0.2810
12/18/2017	128	2.2	ND	0.0500	ND	0.1250	ND	0.1250	ND	0.0500	ND	0.0500
12/26/2017	196	4.1	*	*	*	*	*	*	*	*	*	*
1/5/2018	71	5.0	*	*	*	*	*	*	*	*	*	*
1/11/2018	202	8.9	*	*	*	*	*	*	*	*	*	*
1/17/2018	311	4.2	*	*	*	*	*	*	*	*	*	*
1/23/2018	275	4.0	ND	0.0500	ND	0.1250	ND	0.4990	ND	0.7540	ND	0.0500
1/29/2018	341	5.6	ND	0.0500	ND	0.1250	ND	0.2730	ND	0.0500	ND	0.0500
2/4/2018	197	5.2	ND	0.0500	ND	0.1250	ND	0.2950	ND	0.2240	ND	0.0500
2/10/2018	218	3.8	ND	0.0500	ND	0.1250	ND	0.3350	ND	0.3040	ND	0.0500
2/16/2018	147	5.1	ND	0.0500	ND	0.2500	ND	0.1040	ND	0.0500	ND	0.0500
2/22/2018	315	6.2	ND	0.0500	ND	0.1250	ND	0.5570	ND	2.6200	ND	0.0500
2/28/2018	145	10.1	ND	0.0500	ND	0.1250	ND	1.0400	ND	0.0500	ND	0.0500
3/6/2018	211	8.3	ND	0.0500	ND	0.1250	ND	0.6710	ND	1.1100	0.1050	0.1050
3/12/2018	279	7.4	ND	0.0500	ND	0.1250	ND	0.4470	ND	0.4200	0.2140	0.2140
3/18/2018	125	5.4	ND	0.0500	ND	0.1250	ND	0.1820	ND	0.0500	0.3760	0.3760
3/24/2018	146	7.7	ND	0.0500	ND	0.1250	ND	0.2610	ND	0.0500	ND	0.0500
3/30/2018	126	7.1	ND	0.0500	ND	0.1250	ND	0.3940	ND	1.0300	ND	0.0500
4/5/2018	96	5.6	ND	0.0500	ND	0.1250	ND	0.2170	ND	1.3200	1.2200	1.2200
4/11/2018	114	4.4	ND	0.0500	ND	0.1250	ND	0.5800	ND	1.4100	1.1100	1.1100
4/17/2018	144	9.7	ND	0.0500	ND	0.1250	ND	0.2230	ND	0.0500	ND	0.0500
4/23/2018	243	1.2	ND	0.0500	ND	0.1250	ND	0.5180	ND	0.3960	ND	0.0500
4/29/2018	106	5.5	ND	0.0500	ND	0.1250	ND	0.2900	ND	0.0500	0.1550	0.1550
5/5/2018	320	3.5	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
5/11/2018	123	9.1	ND	0.0500	ND	0.1250	ND	0.1190	ND	0.0500	ND	0.0500
5/17/2018	159	6.0	ND	0.0500	ND	0.1250	ND	0.1250	ND	0.0500	ND	0.0500
5/23/2018	96	5.2	*	*	*	*	*	*	*	*	*	*
5/29/2018	144	5.2	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	0.1840	0.1840
6/4/2018	169	4.4	ND	0.0500	ND	0.1250	ND	0.1130	ND	0.1540	0.1630	0.1630
6/10/2018	140	8.8	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	0.1360	0.1360
6/16/2018	114	8.9	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
6/22/2018	151	4.9	ND	0.0500	ND	0.1250	ND	0.1380	ND	0.0500	0.2250	0.2250
6/28/2018	143	7.0	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500

# FORMOSA VOC CANISTER ANALYSIS

## 3rd QUARTER 2018

### POINT COMFORT - PARK SITE

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
7/4/2018	126	7.1	ND	0.0500	ND	0.1250	0.3940	0.1750	1.0300	1.0300	ND	0.0500
7/10/2018	121	4.6	ND	0.0500	ND	0.1250	0.1750	0.1600	ND	0.0500	ND	0.0500
7/16/2018	153	5.9	ND	0.0500	ND	0.1250	0.1020	0.1020	ND	0.0500	0.1010	0.1010
7/22/2018	176	5.7	ND	0.0500	ND	0.1250	0.2490	0.2490	ND	0.0500	ND	0.0500
7/28/2018	133	4.0	ND	0.0500	ND	0.1250	0.3470	0.3470	0.2380	0.2380	0.6500	0.6500
8/3/2018	107	4.1	ND	0.0500	ND	0.1250	ND	0.0500	1.1700	1.1700	0.6730	0.6730
8/9/2018	138	5.6	ND	0.0500	ND	0.1250	ND	0.1150	ND	0.0500	ND	0.0500
8/17/2018	135	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
8/21/2018	155	5.4	ND	0.0500	ND	0.2500	ND	0.1940	ND	0.0500	ND	0.0500
8/29/2018	121	4.3	ND	0.0500	ND	0.1250	0.1080	0.1080	0.3670	0.3670	0.1040	0.1040
9/6/2018	91	1.8	ND	0.0500	ND	0.1250	*	*	*	*	0.1590	0.1590
9/12/2018	60	4.6	*	*	ND	0.1250	0.5080	0.5080	ND	0.0500	0.3570	0.3570
9/18/2018	187	1.3	ND	0.0500	ND	0.1250	*	*	*	*	*	*
9/24/2018	115	4.5	*	*	*	*	*	*	*	*	*	*
9/30/2018	65	2.2	*	*	*	*	*	*	*	*	*	*

	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
Year-To-Date Sum	0.0000	2.6000	0.0000	6.8750	11.8780	12.4280	17.0770	18.6270	12.7130	14.1630
Rolling Year Average	0.0000	0.0510	0.0000	0.1348	0.2329	0.2437	0.3348	0.3632	0.2493	0.2777
Annual Average	0.0000	0.0500	0.0000	0.1350	0.1783	0.1923	0.1906	0.2266	0.1607	0.1867

Number of theoretical sample periods  
Number of non operational sample periods

60  
9

60  
9

60  
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60  
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60  
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60  
9

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCBQ Air Monitoring Comparison Values (ppb)				Investigation
Chemical	ST	L.T	Limit (ppb)	
Vinyl Chloride	27,000	0.47	25	
Ethylene Dichloride	94	0.72	29.7	
Benzene	180	1.4	28.2	
Ethylene	500,000	30	500	
1,3 Butadiene	1,700	9	25	



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - PARK SITE**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
11/14/17	89	5.0	ND	0.0500	ND	0.1250	0.4140	0.4140	ND	0.0500	ND	0.0500
11/14/17 <sub>d</sub>	89	5.0	ND	0.0500	ND	0.1250	0.2640	0.2640	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		44.2478		ND		ND	
11/26/17	103	2.6	ND	0.1000	ND	0.2500	0.3020	0.3020	1.8100	1.8100	1.7600	1.7600
11/26/17 <sub>d</sub>	103	2.6	ND	0.0500	ND	0.1250	0.2690	0.2690	1.7500	1.7500	1.7500	1.7500
Relative Percent Difference (RPD)			ND		ND		11.5587		3.3708		0.5698	
12/14/17	218	2.2	ND	0.0500	ND	0.1250	0.3610	0.3610	0.9360	0.9360	0.2810	0.2810
12/14/17 <sub>d</sub>	218	2.2	0.6520	0.6520	ND	0.1250	0.3540	0.3540	0.4030	0.4030	ND	0.0500
Relative Percent Difference (RPD)			-171.5100		ND		1.9580		79.6117		139.5770	
01/23/18	275	4.0	ND	0.0500	ND	0.1250	0.4990	0.4990	0.7540	0.7540	ND	0.0500
01/23/18 <sub>d</sub>	275	4.0	ND	0.5000	ND	0.1250	0.5020	0.5020	0.7230	0.7230	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-0.5994		4.1977		ND	
02/28/18	145	10.1	ND	0.0500	ND	0.1250	1.0400	1.0400	ND	0.0500	0.1050	0.1050
02/28/18 <sub>d</sub>	145	10.1	ND	0.0500	ND	0.1250	1.1200	1.1200	ND	0.0500	0.1440	0.1440
Relative Percent Difference (RPD)			ND		ND		-7.4074		ND		-31.3253	
07/28/18	133	4.0	ND	0.0500	ND	0.1250	0.2490	0.2490	0.2380	0.2380	0.6500	0.6500
07/28/18 <sub>d</sub>	133	4.0	ND	0.0500	ND	0.1250	0.2500	0.2500	0.2350	0.2350	0.6380	0.6380
Relative Percent Difference (RPD)			ND		ND		-0.4008		1.2685		1.8634	
08/29/18	121	4.3	ND	0.0500	ND	0.1250	0.1940	0.1940	ND	0.0500	0.1040	0.1040
08/29/18 <sub>d</sub>	121	4.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.1080	0.1080
Relative Percent Difference (RPD)			ND		ND		118.0328		ND		-3.7736	
09/18/18	187	1.3	ND	0.0500	ND	0.1250	0.5080	0.5080	ND	0.0500	0.3570	0.3570
09/18/18 <sub>d</sub>	187	1.3	ND	0.0500	ND	0.1250	0.5940	0.5940	ND	0.0500	0.2820	0.2820
Relative Percent Difference (RPD)			ND		ND		-15.6080		ND		23.4742	

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**PC PLANT SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/1/2017	113	3.2	ND	0.0500	ND	0.1250	0.3060	0.3060	1.3800	1.3800	2.5400	2.5400
10/3/2017	83	6.2	ND	0.0500	ND	0.1250	ND	0.0500	0.8860	0.8860	2.4300	2.4300
10/5/2017	84	5.0	ND	0.0500	ND	0.1250	0.1280	0.1280	ND	0.0500	ND	0.0500
10/7/2017	268	2.6	*	*	*	*	*	*	*	*	*	*
10/9/2017	130	6.3	ND	0.0500	ND	0.1250	ND	0.0500	0.1800	0.1800	0.3450	0.3450
10/11/2017	231	5.9	ND	0.0500	0.3180	0.3180	0.5610	0.5610	0.4280	0.4280	ND	0.0500
10/13/2017	111	3.1	ND	0.0500	ND	0.1250	0.2690	0.2690	0.1670	0.1670	0.3590	0.3590
10/15/2017	241	4.6	*	*	*	*	*	*	*	*	*	*
10/17/2017	229	2.0	*	*	*	*	*	*	*	*	*	*
10/19/2017	71	4.7	ND	0.0500	ND	1.2500	ND	0.5000	2.8300	2.8300	9.5600	9.5600
10/21/2017	115	6.0	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
10/23/2017	137	1.8	*	*	*	*	*	*	*	*	*	*
10/25/2017	227	2.0	ND	0.0500	ND	0.1250	0.2470	0.2470	ND	0.0500	ND	0.0500
10/27/2017	224	6.0	ND	0.0500	ND	0.1250	0.1430	0.1430	0.1290	0.1290	ND	0.0500
10/29/2017	163	1.5	ND	0.0500	ND	0.1250	0.1740	0.1740	ND	0.0500	0.1560	0.1560
10/31/2017	106	3.2	ND	0.0500	ND	0.1250	0.5430	0.5430	0.1700	0.1700	1.3200	1.3200
11/2/2017	153	5.6	ND	0.0500	ND	0.1250	0.1230	0.1230	ND	0.0500	ND	0.0500
11/4/2017	128	4.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/6/2017	157	6.4	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/8/2017	222	7.9	ND	0.0500	0.6810	0.6810	0.7560	0.7560	1.1200	1.1200	ND	0.0500
11/10/2017	140	2.1	ND	0.0500	ND	0.1250	0.6440	0.6440	ND	0.0500	1.4500	1.4500
11/12/2017	70	5.0	ND	0.0500	ND	0.1250	0.1670	0.1670	0.9230	0.9230	3.6900	3.6900
11/14/2017	89	5.0	ND	0.1000	ND	0.2500	0.3140	0.3140	0.9990	0.9990	3.5400	3.5400
11/16/2017	107	4.9	*	*	*	*	*	*	*	*	*	*
11/18/2017	219	6.1	ND	0.0500	ND	0.1250	0.8410	0.8410	ND	0.0500	ND	0.0500
11/20/2017	72	4.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
11/22/2017	235	7.1	*	*	*	*	*	*	*	*	*	*
11/24/2017	138	2.5	*	*	*	*	*	*	*	*	*	*
11/26/2017	103	2.6	ND	0.0500	ND	0.1250	0.4570	0.4570	1.8200	1.8200	5.2200	5.2200
11/28/2017	98	4.2	ND	0.0500	ND	0.1250	0.3590	0.3590	ND	0.0500	0.2460	0.2460
11/30/2017	163	0.7	ND	0.0500	ND	0.1250	0.3680	0.3680	1.2400	1.2400	2.3800	2.3800
12/2/2017	97	4.1	ND	0.0500	ND	0.1250	0.3300	0.3300	ND	0.0500	0.1180	0.1180
12/4/2017	135	5.5	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
12/6/2017	186	6.3	ND	0.0500	ND	0.1250	0.4570	0.4570	0.7390	0.7390	ND	0.0500
12/8/2017	257	3.5	ND	0.0500	ND	0.1250	0.1300	0.1300	ND	0.0500	ND	0.0500
12/10/2017	234	1.5	ND	0.0500	ND	0.1250	ND	0.0500	0.3590	0.3590	ND	0.0500
12/12/2017	228	4.3	ND	0.0500	ND	0.1250	0.3600	0.3600	0.4160	0.4160	ND	0.0500
12/14/2017	218	2.2	ND	0.0500	ND	0.1250	0.6800	0.6800	0.6140	0.6140	0.3540	0.3540
12/16/2017	40	2.3	ND	0.0500	ND	0.1250	0.7680	0.7680	ND	0.0500	ND	0.0500
12/18/2017	128	2.2	ND	0.0500	ND	0.1250	0.3080	0.3080	0.7380	0.7380	0.2990	0.2990
12/20/2017	228	2.0	ND	0.0500	ND	0.1250	0.4090	0.4090	0.4890	0.4890	1.1700	1.1700
12/22/2017	157	5.5	ND	0.0500	ND	0.1250	0.2620	0.2620	ND	0.0500	ND	0.0500
12/24/2017	220	3.3	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
12/26/2017	196	4.1	ND	0.0500	ND	0.1250	0.5560	0.5560	1.0000	1.0000	0.9170	0.9170
12/28/2017	218	6.3	ND	0.0500	ND	0.1250	0.4520	0.4520	0.9800	0.9800	ND	0.0500
12/30/2017	270	3.1	ND	0.0500	ND	0.1250	0.2910	0.2910	0.2980	0.2980	ND	0.0500
1/1/2018	345	8.7	ND	0.0500	ND	0.1250	0.4340	0.4340	0.1340	0.1340	ND	0.0500
1/3/2018	289	5.1	ND	0.0500	ND	0.1250	0.1280	0.1280	ND	0.0500	ND	0.0500
1/5/2018	71	5.0	*	*	*	*	*	*	*	*	*	*
1/7/2018	119	5.7	ND	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	ND	0.0500
1/9/2018	146	5.6	ND	0.0500	ND	0.1250	1.1000	1.1000	0.2570	0.2570	0.3910	0.3910

**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**PC PLANT SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
1/11/2018	202	8.9	ND	0.0500	ND	0.1250	0.1960	0.1960	ND	0.0500	0.7240	0.7240
1/13/2018	245	6.9	ND	0.0500	ND	0.1250	0.9340	0.9340	1.5400	0.0500	1.7900	1.7900
1/15/2018	89	5.9	ND	0.0500	ND	0.1250	0.1030	0.1030	ND	0.0500	0.1370	0.1370
1/17/2018	311	4.2	ND	0.0500	ND	0.1250	1.2900	1.2900	1.0200	1.0200	0.1850	0.1850
1/19/2018	94	7.9	ND	0.0500	ND	0.1250	0.5730	0.5730	2.6500	2.6500	2.6000	2.6000
1/21/2018	126	7.5	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
1/23/2018	275	4.0	ND	0.0500	ND	0.1250	0.6400	0.6400	0.4360	0.4360	0.3610	0.3610
1/25/2018	114	6.3	10.5000	10.5000	ND	0.7500	1.2400	1.2400	3.5900	3.5900	2.5100	2.5100
1/27/2018	121	4.4	5.4500	5.4500	ND	0.7500	1.5600	1.5600	1.6800	1.6800	6.9100	6.9100
1/29/2018	341	5.6	ND	0.0500	ND	0.1250	0.8990	0.8990	1.0400	1.0400	ND	0.0500
1/31/2018	131	5.9	ND	0.0500	ND	0.1250	0.3660	0.3660	ND	0.0500	ND	0.0500
2/2/2018	146	8.4	ND	0.0500	ND	0.1250	0.8700	0.8700	0.6390	0.6390	0.6030	0.6030
2/4/2018	197	5.2	*	*	*	*	*	*	*	*	*	*
2/6/2018	102	6.0	ND	0.0500	ND	0.1250	0.2270	0.2270	0.2520	0.2520	1.4000	1.4000
2/8/2018	268	5.0	ND	0.0500	ND	0.1250	0.9460	0.9460	1.0600	1.0600	0.2510	0.2510
2/10/2018	218	3.8	ND	0.0500	ND	0.1250	2.0700	2.0700	0.7500	0.7500	0.2350	0.2350
2/12/2018	248	8.7	ND	0.1000	ND	0.2500	0.9700	0.9700	0.9820	0.9820	ND	0.0500
2/14/2018	206	3.9	ND	0.0500	ND	0.1250	1.6800	1.6800	1.4900	1.4900	0.5790	0.5790
2/16/2018	147	5.1	ND	0.0500	ND	0.1250	0.2400	0.2400	0.1520	0.1520	ND	0.0500
2/18/2018	118	7.0	ND	0.0500	ND	0.1250	0.7060	0.7060	3.4300	3.4300	1.9200	1.9200
2/20/2018	115	9.6	ND	0.0500	0.3320	0.3320	0.1010	0.1010	ND	0.0500	ND	0.0500
2/22/2018	315	6.2	*	*	*	*	*	*	*	*	*	*
2/24/2018	141	8.8	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
2/26/2018	156	8.2	ND	0.0500	ND	0.1250	0.1620	0.1620	ND	0.0500	ND	0.0500
2/28/2018	145	10.1	ND	0.0500	ND	0.1250	0.4650	0.4650	ND	0.0500	ND	0.0500
3/2/2018	159	8.1	ND	0.0500	ND	0.1250	1.2600	1.2600	1.5700	1.5700	1.6000	1.6000
3/4/2018	105	8.5	*	*	*	*	*	*	*	*	*	*
3/6/2018	211	8.3	ND	0.0500	ND	0.1250	0.8900	0.8900	1.4700	1.4700	0.6650	0.6650
3/8/2018	69	7.6	0.9900	0.9900	ND	0.1250	ND	ND	4.6100	4.6100	2.3000	2.3000
3/10/2018	155	6.7	ND	0.0500	ND	0.1250	0.1790	0.1790	ND	0.0500	ND	0.0500
3/12/2018	279	7.4	*	*	*	*	*	*	*	*	*	*
3/14/2018	150	5.1	ND	0.0500	ND	0.1250	1.0800	1.0800	4.8300	4.8300	0.5480	0.5480
3/16/2018	152	6.8	ND	0.0500	ND	0.1250	0.2110	0.2110	ND	0.0500	ND	0.0500
3/18/2018	125	5.4	ND	0.0500	ND	0.1250	0.1480	0.1480	ND	0.0500	ND	0.0500
3/20/2018	287	6.1	ND	0.0500	ND	0.1250	0.7890	0.7890	3.5800	3.5800	0.3810	0.3810
3/22/2018	102	7.8	ND	0.0500	ND	0.1250	0.3950	0.3950	ND	0.0500	ND	0.0500
3/24/2018	146	7.7	ND	0.0500	ND	0.1250	0.1390	0.1390	ND	0.0500	ND	0.0500
3/26/2018	124	10.2	ND	0.0500	ND	0.1250	0.1600	0.1600	ND	0.0500	ND	0.0500
3/28/2018	130	9.2	ND	0.0500	ND	0.1250	0.1480	0.1480	ND	0.0500	ND	0.0500
3/30/2018	126	7.1	ND	0.0500	ND	0.1250	0.2900	0.2900	0.4610	0.4610	0.1430	0.1430
4/1/2018	126	8.6	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
4/3/2018	140	7.3	ND	0.0500	ND	0.1250	0.1130	0.1130	ND	0.0500	ND	0.0500
4/5/2018	96	5.6	ND	0.0500	ND	0.1250	0.1540	0.1540	1.0500	1.0500	1.2200	1.2200
4/7/2018	331	4.7	ND	0.0500	ND	0.1250	0.2520	0.2520	0.1070	0.1070	ND	0.0500
4/9/2018	32	5.1	2.5800	2.5800	ND	0.1250	ND	ND	4.9200	4.9200	2.4400	2.4400
4/11/2018	114	4.4	ND	0.0500	ND	0.1250	0.2320	0.2320	0.2140	0.2140	0.4920	0.4920
4/13/2018	142	10.2	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
4/15/2018	305	3.0	ND	0.0500	ND	0.1250	0.3520	0.3520	0.1640	0.1640	ND	0.0500
4/17/2018	144	9.7	ND	0.5000	ND	0.1250	0.1650	0.1650	ND	0.0500	ND	0.0500
4/19/2018	48	3.3	ND	0.0500	ND	0.1250	0.6060	0.6060	0.4210	0.4210	0.1940	0.1940
4/21/2018	108	6.4	ND	0.0500	ND	0.1250	0.1840	0.1840	ND	0.0500	ND	0.0500



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**PC PLANT SITE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
4/23/2018	243	1.2	ND	0.0500	ND	0.1250	0.2550	0.1050	ND	0.0500	ND	0.0500
4/25/2018	124	3.5	ND	0.0500	ND	0.1250	0.3300	0.1230	0.1980	0.0500	0.3550	0.3550
4/27/2018	336	2.2	ND	0.0500	ND	0.1250	0.5380	0.2280	0.1980	0.0500	0.1260	0.1260
4/29/2018	106	5.5	*	*	*	*	*	0.1160	2.2300	0.0500	0.2050	0.2050
5/1/2018	113	9.8	ND	0.0500	ND	0.1250	0.1050	ND	*	*	*	*
5/3/2018	125	9.9	ND	0.0500	ND	0.1250	0.1230	ND	ND	0.0500	ND	0.0500
5/5/2018	320	3.5	ND	0.0500	ND	0.1250	0.2280	ND	ND	0.0500	ND	0.0500
5/7/2018	166	2.7	ND	0.0500	ND	0.1250	0.1160	ND	ND	0.0500	ND	0.0500
5/9/2018	126	6.5	ND	0.0500	ND	0.1250	0.0500	ND	ND	0.0500	ND	0.0500
5/11/2018	122	9.1	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
5/13/2018	115	7.9	ND	0.1000	ND	0.2500	0.9700	ND	0.9820	0.0500	ND	0.0500
5/15/2018	125	5.6	ND	0.0500	ND	0.1250	ND	ND	0.9820	0.0500	ND	0.0000
5/17/2018	159	6.0	ND	0.0500	ND	0.1250	0.1320	ND	ND	0.0500	ND	0.0500
5/19/2018	121	10.1	ND	0.0500	ND	0.1250	0.0500	ND	ND	0.0500	ND	0.0500
5/21/2018	117	3.9	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
5/23/2018	96	5.2	*	*	*	*	0.1520	0.1520	0.3580	0.3580	0.8050	0.8050
5/25/2018	149	3.0	ND	0.0500	ND	0.1250	*	*	*	*	*	*
5/27/2018	146	4.9	*	*	*	*	0.1160	0.1160	ND	0.0500	ND	0.0500
5/29/2018	144	5.2	ND	0.0500	ND	0.1250	*	*	*	*	*	*
5/31/2018	128	8.8	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	0.1290	0.1290
6/2/2018	148	6.7	ND	0.0500	ND	0.1250	0.1020	0.1020	ND	0.0500	ND	0.0500
6/4/2018	169	4.4	ND	0.0500	ND	0.1250	0.1170	0.1170	ND	0.0500	0.1390	0.1390
6/6/2018	137	6.7	ND	0.0500	ND	0.1250	ND	ND	0.1750	0.1750	0.1230	0.1230
6/8/2018	121	7.2	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
6/10/2018	140	8.8	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
6/12/2018	126	8.8	ND	0.0500	ND	0.1250	0.1930	0.1930	ND	0.0500	ND	0.0500
6/14/2018	122	6.9	ND	0.0500	ND	0.1250	0.1120	0.1120	ND	0.0500	ND	0.0500
6/16/2018	114	8.9	*	*	*	*	0.1490	0.1490	ND	0.0500	ND	0.0500
6/18/2018	99	4.8	ND	0.0500	ND	0.1250	*	*	*	*	*	*
6/20/2018	105	5.3	ND	0.0500	ND	0.1250	0.1120	0.1120	0.6960	0.6960	1.8400	1.8400
6/22/2018	151	4.9	ND	0.0500	ND	0.1250	0.1230	0.1230	0.3960	0.3960	0.6300	0.6300
6/24/2018	131	8.8	ND	0.0500	ND	0.1250	0.1560	0.1560	ND	0.0500	0.1030	0.1030
6/26/2018	123	7.5	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
6/28/2018	143	7.0	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
6/30/2018	137	8.3	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
7/2/2018	140	5.3	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
7/4/2018	130	2.8	ND	0.5000	ND	1.2500	ND	ND	ND	0.5000	ND	0.5000
7/6/2018	208	0.7	ND	0.0500	ND	0.1250	0.3180	0.3180	0.1040	0.1040	10.3000	10.3000
7/8/2018	161	2.8	ND	0.0500	ND	0.1250	0.1930	0.1930	ND	0.0500	0.3450	0.3450
7/10/2018	121	4.6	ND	0.0500	ND	0.1250	0.3650	0.3650	ND	0.0500	ND	0.0500
7/12/2018	146	4.3	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
7/14/2018	138	6.1	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
7/16/2018	153	5.9	ND	0.0500	ND	0.1250	0.1080	0.1080	ND	0.0500	ND	0.0500
7/18/2018	164	5.6	ND	0.5000	ND	0.1250	0.1850	0.1850	ND	0.0500	ND	0.0500
7/20/2018	163	5.9	ND	0.0500	ND	0.1250	0.4950	0.4950	ND	0.0500	ND	0.0500
7/22/2018	176	5.7	ND	0.0500	ND	0.1250	0.4890	0.4890	ND	0.0500	0.1720	0.1720
7/24/2018	145	3.7	ND	0.0500	ND	0.1250	0.1390	0.1390	ND	0.0500	0.1090	0.1090
7/26/2018	143	3.1	ND	0.0500	ND	0.1250	0.2550	0.2550	ND	0.0500	ND	0.0500
7/28/2018	133	4.0	ND	0.0500	ND	0.1250	0.1870	0.1870	ND	0.0500	0.1050	0.1050
7/30/2018	156	3.9	ND	0.0500	ND	0.1250	ND	ND	ND	0.0500	ND	0.0500
8/1/2018	129	1.1	ND	0.0500	ND	0.1250	0.3900	0.3900	1.2300	1.2300	0.3580	0.3580



# FORMOSA VOC CANISTER ANALYSIS

## 3rd QUARTER 2018

### PC PLANT SITE

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
8/3/2018	107	4.1	ND	0.0500	ND	0.1250	0.3420	0.7380	1.2800	0.7380	1.2800	0.0500
8/5/2018	101	6.5	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/7/2018	122	6.2	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/9/2018	138	5.6	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	0.1170	0.1170
8/11/2018	149	4.1	*	*	*	*	*	*	*	*	*	*
8/13/2018	134	7.7	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/15/2018	142	6.5	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/17/2018	135	6.0	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/19/2018	158	7.4	*	*	*	*	*	*	*	*	*	*
8/21/2018	155	5.4	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/23/2018	136	3.9	*	*	*	*	*	*	*	*	*	*
8/25/2018	125	5.9	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/27/2018	124	6.9	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	ND	0.0500
8/29/2018	121	4.3	ND	0.0500	ND	0.1250	ND	ND	0.0500	ND	0.1120	0.1120
8/31/2018	106	4.0	*	*	*	*	*	*	*	*	*	*
9/2/2018	106	2.1	ND	0.0500	ND	0.1250	ND	ND	0.0500	0.1700	0.3080	0.3080
9/4/2018	69	4.6	ND	0.0500	ND	0.1250	0.1090	1.6600	1.6600	1.6600	1.9400	1.9400
9/6/2018	91	1.8	ND	0.0500	ND	0.1250	0.1680	0.6980	0.6980	0.6980	0.6670	0.6670
9/8/2018	120	4.8	ND	0.0500	ND	0.1250	0.1760	0.1070	0.1070	0.1070	0.1150	0.1150
9/10/2018	40	3.7	ND	0.0500	ND	0.1250	0.1080	1.5300	1.5300	1.5300	3.5800	3.5800
9/12/2018	60	4.6	ND	0.0500	ND	0.1250	0.1600	2.0500	2.0500	2.0500	3.3800	3.3800
9/14/2018	41	6.1	ND	0.0500	ND	0.1250	0.1550	2.1800	2.1800	2.1800	5.1700	5.1700
9/16/2018	122	1.9	ND	0.0500	ND	0.1250	0.2860	0.5470	0.5470	0.5470	0.8670	0.8670
9/18/2018	187	1.3	ND	0.0500	ND	0.1250	0.1320	ND	ND	ND	0.1420	0.1420
9/20/2018	121	5.9	ND	0.0500	ND	0.1250	ND	ND	ND	ND	0.0500	0.0500
9/22/2018	204	2.9	ND	0.0500	ND	0.1250	0.1510	ND	ND	ND	ND	0.0500
9/24/2018	115	4.5	ND	0.0500	ND	0.1250	0.1780	ND	ND	ND	ND	0.0500
9/26/2018	132	2.4	ND	0.0500	ND	0.1250	0.1510	0.4270	0.4270	0.4270	0.8060	0.8060
9/28/2018	62	2.9	ND	0.0500	ND	0.1250	ND	1.6100	1.6100	1.6100	1.9400	1.9400
9/30/2018	65	2.2	ND	0.0500	ND	0.1250	0.2190	2.1300	2.1300	2.1300	2.8200	2.8200

	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
Year-To-Date Sum	19.5200	29.8700	1.3310	25.2060	46.7460	49.9460	84.7200	89.6700	105.8490	110.1990
Rolling Year Average	0.1205	0.1844	0.0082	0.1556	0.2886	0.3083	0.5230	0.5535	0.6534	0.6802
Annual Average	0.0311	0.0973	0.0000	0.1401	0.1403	0.1650	0.3517	0.3903	0.5244	0.5521

Number of theoretical sample periods

Number of non operational sample periods

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

TCEQ Air Monitoring Comparison Values (ppb)			Investigation Limit (ppb)
Chemical	ST	LT	
Vinyl Chloride	27,000	0.47	25
Ethylene Dichloride	94	0.72	29.7
Benzene	180	1.4	28.2
Ethylene	500,000	30	500
1, 3 Butadiene	1,700	9	25



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - PC SITE**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
10/13/17	111	3.1	ND	0.0500	ND	0.1250	0.2690	0.2690	0.1670	0.1690	0.3590	0.3590
10/31/17	111	3.1	ND	0.0500	ND	0.1250	0.2620	0.2620	0.1690		0.3670	0.3670
Relative Percent Difference (RPD)			ND		ND		2.6365		-1.1905		-2.2039	
10/19/17	71	4.7	ND	0.5000	ND	1.2500	ND	0.5000	2.8300	2.8300	9.5600	9.5600
10/19/17	71	4.7	ND	0.5000	ND	1.2500	ND	0.5000	2.8700	2.8700	9.9300	9.9300
Relative Percent Difference (RPD)			ND		ND		ND		-1.4035		-3.7968	
10/31/17	106	3.2	ND	0.0500	ND	0.1250	0.5430	0.5430	0.1700	0.1700	1.3200	1.3200
10/31/17	106	3.2	ND	0.0500	ND	0.1250	0.5250	0.5250	0.1710	0.1710	1.3100	1.3100
Relative Percent Difference (RPD)			ND		ND		3.3708		-0.5865		0.7605	
11/08/17	222	7.9	ND	0.0500	0.6810	0.6810	0.7560	0.7560	1.1200	1.1200	ND	0.0500
11/08/17	222	7.9	ND	0.0500	ND	0.1250	1.2200	1.2200	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		137.9653		-46.9636		182.9060		ND	
11/14/17	89	5.0	ND	0.1000	ND	0.2500	0.3140	0.3140	0.9990	0.9990	3.5400	3.5400
11/14/17	89	5.0	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)			*		*		*		*		*	
11/30/17	163	0.7	ND	0.0500	ND	0.1250	0.3680	0.3680	1.2400	1.2400	2.3800	2.3800
11/30/17	163	0.7	ND	0.0500	ND	0.1250	0.3190	0.3190	1.2600	1.2600	2.1800	2.1800
Relative Percent Difference (RPD)			ND		ND		14.2649		-1.6000		8.7719	
12/06/17	186	6.3	ND	0.0500	ND	0.1250	0.4570	0.4570	0.7390	0.7390	ND	0.0500
12/06/17	186	6.3	ND	0.0500	ND	0.1250	0.4610	0.4610	1.1200	1.1200	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-0.8715		-40.9898		ND	
12/12/17	228	4.3	ND	0.0500	ND	0.1250	0.3600	0.3600	0.4160	0.4160	ND	0.0500
12/12/17	228	4.3	ND	0.0500	ND	0.1250	0.3230	0.3230	0.3470	0.3470	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		10.8346		18.0865		ND	
12/16/17	40	2.3	ND	0.0500	ND	0.1250	0.7680	0.7680	ND	0.0500	ND	0.0500
12/16/17	40	2.3	ND	0.0500	ND	0.1250	0.2040	0.2040	0.7850	0.7850	1.7600	1.7600
Relative Percent Difference (RPD)			ND		ND		116.0494		-176.0479		-188.9503	
12/22/17	157	5.5	ND	0.0500	ND	0.1250	0.2620	0.2620	ND	0.0500	ND	0.0500
12/22/17	157	5.5	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)			*		*		*		*		*	
01/09/18	146	5.6	ND	0.0500	ND	0.1250	1.1000	1.1000	0.2570	0.2570	0.3910	0.3910
01/09/18	146	5.6	ND	0.0500	ND	0.1250	1.2000	1.2000	0.2780	0.2780	0.6330	0.6330
Relative Percent Difference (RPD)			ND		ND		-8.6957		-7.8505		-47.2656	
01/15/18	89	5.9	ND	0.0500	ND	0.1250	0.1030	0.1030	ND	0.0500	0.1370	0.1370
01/15/18	89	5.9	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)			*		*		*		*		*	
01/23/18	275	4.0	ND	0.0500	ND	0.1250	0.6400	0.6400	0.4360	0.4360	0.3610	0.3610
01/23/18	275	4.0	ND	0.5000	ND	0.1250	0.6770	0.6770	0.9880	0.9880	0.3680	0.3680
Relative Percent Difference (RPD)			ND		ND		-5.6188		-77.5281		-1.9204	
01/27/18	121	4.4	5.4500	5.4500	ND	0.7500	1.5600	1.5600	1.6800	1.6800	6.9100	6.9100
01/27/18	121	4.4	3.5900	3.5900	ND	0.7500	0.7840	0.7840	0.9780	0.9780	4.5200	4.5200
Relative Percent Difference (RPD)			41.1504		ND		66.2116		52.8217		41.8198	

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
02/02/18	146	8.4	ND	0.0500	ND	0.1250	0.8700	0.6390	0.6030	ND	0.0500	
02/02/18 <sub>a</sub>	146	8.4	ND	0.0500	ND	0.1250	1.2200	0.0500	0.0500	ND	0.0500	
Relative Percent Difference (RPD)			ND		ND		-33.4928		170.9724		169.3721	
02/10/18	218	3.8	ND	0.0500	ND	0.1250	2.0700	0.7500	0.2350	0.7500	0.2350	
02/10/18 <sub>a</sub>	218	3.8	ND	0.0500	ND	0.1250	1.4800	0.7450	0.1480	0.7450	0.1480	
Relative Percent Difference (RPD)			ND		ND		33.2394		0.6689		43.4308	
02/14/18	206	3.9	ND	0.0500	ND	0.1250	1.6800	1.4900	0.5790	1.4900	0.5790	
02/14/18 <sub>a</sub>	206	3.9	*	*	*	*	*	*	*	*	*	
Relative Percent Difference (RPD)			*		*		*		*		*	
02/24/18	141	8.8	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	0.0500	
02/24/18 <sub>a</sub>	141	8.8	ND	0.0500	ND	0.1250	0.9610	0.9610	0.4750	1.5000	0.4750	
Relative Percent Difference (RPD)			ND		ND		-180.2176		-187.0968		-161.9048	
03/04/18	105	8.5	*	*	*	*	*	*	*	*	*	
03/04/18 <sub>a</sub>	105	8.5	*	*	*	*	*	*	*	*	*	
Relative Percent Difference (RPD)			*		*		*		*		*	
03/10/18	155	6.7	ND	0.0500	ND	0.1250	0.1790	0.1790	0.0500	0.0500	0.0500	
03/10/18 <sub>a</sub>	155	6.7	*	*	*	*	*	*	*	*	*	
Relative Percent Difference (RPD)			*		*		*		*		*	
03/16/18	152	6.8	ND	0.0500	ND	0.1250	0.2110	0.2110	0.0500	0.0500	0.0500	
03/16/18 <sub>a</sub>	152	6.8	ND	0.0500	ND	0.1250	0.1620	0.1620	0.0500	0.0500	0.0500	
Relative Percent Difference (RPD)			ND		ND		26.2735		ND		ND	
03/22/18	102	7.8	ND	0.0500	ND	0.1250	0.3950	0.3950	0.0500	0.0500	0.0500	
03/22/18 <sub>a</sub>	102	7.8	ND	0.0500	ND	0.1250	0.3660	0.3660	0.0500	0.0500	0.0500	
Relative Percent Difference (RPD)			ND		ND		7.6216		ND		ND	
04/03/18	140	7.3	ND	0.0500	ND	0.1250	0.1130	0.1130	0.0500	0.0500	0.0500	
04/03/18 <sub>a</sub>	140	7.3	ND	0.0500	ND	0.1250	0.1650	0.1650	0.0500	0.0500	0.0500	
Relative Percent Difference (RPD)			ND		ND		-37.4101		ND		ND	
04/09/18	32	5.1	2.5800	2.5800	ND	0.1250	ND	0.0500	4.9200	4.9200	2.4400	
04/09/18 <sub>a</sub>	32	5.1	*	*	*	*	*	*	*	*	*	
Relative Percent Difference (RPD)			*		*		*		*		*	
04/17/18	144	9.7	ND	0.5000	ND	0.1250	0.1650	0.1650	0.0500	0.0500	0.0500	
04/17/18 <sub>a</sub>	144	9.7	ND	0.5000	ND	0.1250	0.1180	0.1180	0.0500	0.0500	0.0500	
Relative Percent Difference (RPD)			ND		ND		33.2155		ND		ND	
04/21/18	108	6.4	ND	0.0500	ND	0.1250	0.1840	0.1840	0.0500	0.0500	0.0500	
04/21/18 <sub>a</sub>	108	6.4	ND	0.0500	ND	0.1250	0.1880	0.1880	0.0500	0.0500	0.0500	
Relative Percent Difference (RPD)			ND		ND		-2.1505		ND		ND	
04/27/18	336	2.2	ND	0.0500	ND	0.1250	0.5380	0.5380	0.2050	2.2300	0.2050	
04/27/18 <sub>a</sub>	336	2.2	ND	0.0500	ND	0.1250	0.5740	0.5740	0.1990	2.8200	0.1990	
Relative Percent Difference (RPD)			ND		ND		-6.4748		-23.3663		2.9703	
05/03/18	125	9.9</										

**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - PC SITE**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
Relative Percent Difference (RPD)			*		*		*		*		*	
05/11/18	122	9.1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
05/11/18 <sub>a</sub>	122	9.1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		ND		ND		ND	
05/15/18	125	5.6	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
05/15/18 <sub>a</sub>	125	5.6	ND	0.0500	ND	0.1250	0.1410	0.1410	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-95.2880		ND		ND	
05/31/18	128	8.8	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
05/31/18 <sub>a</sub>	128	8.8	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		ND		ND		ND	
06/08/18	121	7.2	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
06/08/18 <sub>a</sub>	121	7.2	ND	0.0500	ND	0.1250	0.1370	0.1370	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-93.0481		ND		ND	
06/14/18	122	6.9	ND	0.0500	ND	0.1250	0.1490	0.1490	ND	0.0500	ND	0.0500
06/14/18 <sub>a</sub>	122	6.9	ND	0.0500	ND	0.1250	0.1860	0.1860	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		-22.0896		ND		ND	
06/20/18	105	5.3	ND	0.0500	ND	0.1250	0.1230	0.1230	0.3960	0.3960	0.6200	0.6200
06/20/18 <sub>a</sub>	105	5.3	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)												
06/26/18	123	7.5	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
06/26/18 <sub>a</sub>	123	7.5	ND	0.1000	ND	0.2500	ND	0.1000	ND	0.1000	ND	0.1000
Relative Percent Difference (RPD)			ND		ND		ND		ND		ND	
07/04/18	130	2.8	ND	0.5000	ND	1.2500	ND	0.5000	ND	0.5000	10.3000	10.3000
07/04/18 <sub>a</sub>	130	2.8	ND	0.5000	ND	1.2500	ND	0.5000	ND	0.5000	9.4900	9.4900
Relative Percent Difference (RPD)			ND		ND		ND		ND		8.1860	
07/08/18	161	2.8	ND	0.0500	ND	0.1250	0.1930	0.1930	ND	0.0500	ND	0.0500
07/08/18 <sub>a</sub>	161	2.8	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)			*		*		*		*		*	
07/14/18	138	6.1	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
07/14/18 <sub>a</sub>	138	6.1	ND	0.5000	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND		ND		ND		ND		ND	
07/20/18	163	5.9	ND	0.0500	ND	0.1250	0.4950	0.4950	ND	0.0500	0.1720	0.1720
07/20/18 <sub>a</sub>	163	5.9	ND	0.0500	ND	0.1250	0.1070	0.1070	ND	0.0500	0.1370	0.1370
Relative Percent Difference (RPD)			ND		ND		128.9037		ND		22.6537	
07/26/18	143	3.1	ND	0.0500	ND	0.1250	0.2550	0.2550	ND	0.0500	0.1000	0.1000
07/26/18 <sub>a</sub>	143	3.1	ND	0.1000	ND	0.2500	22.1000	22.1000	ND	0.1000	0.7510	0.7510
Relative Percent Difference (RPD)			ND		ND		-195.4373		ND		-152.9965	
08/01/18	129	1.1	ND	0.0500	ND	0.1250	0.3900	0.3900	1.2300	1.2300	0.3580	0.3580
08/01/18 <sub>a</sub>	129	1.1	ND	0.0500	ND	0.1250	0.4900	0.4900	1.1100	1.1100	0.2890	0.2890
Relative Percent Difference (RPD)			ND		ND		-22.7273		10.2564		21.3292	
08/07/18	122	6.2	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500



**FORMOSA VOC CANISTER ANALYSIS**  
**3rd QUARTER 2018**  
**POINT COMFORT - PC SITE**  
**DUPLICATE SAMPLE SCHEDULE**

SAMPLE DATE	AVG. WIND DIRECTION (Degrees)	AVG. WIND SPEED (mph)	ETHYLENE		1,3 BUTADIENE		BENZENE		VINYL CHLORIDE		ETHYLENE DICHLORIDE	
			Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)	Actual (ppb)	1/2 Reported LOD (ppb)
08/07/18 <sub>a</sub>	122	6.2	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
08/15/18	142	6.5	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
08/15/18 <sub>a</sub>	142	6.5	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
08/21/18	155	5.4	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
08/21/18 <sub>a</sub>	155	5.4	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
08/25/18	125	5.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
08/25/18 <sub>a</sub>	125	5.9	ND	0.0500	ND	0.1250	ND	0.0500	ND	0.0500	ND	0.0500
Relative Percent Difference (RPD)			ND									
09/06/18	91	1.8	ND	0.0500	ND	0.1250	0.1680	0.1680	0.6980	0.6980	0.6670	0.6670
09/06/18 <sub>a</sub>	91	1.8	ND	0.0500	ND	0.1250	0.2100	0.2100	0.6380	0.6380	0.6510	0.6510
Relative Percent Difference (RPD)			ND									
09/12/18	60	4.6	ND	0.0500	ND	0.1250	0.1600	0.1600	2.0500	2.0500	3.3800	3.3800
09/12/18 <sub>a</sub>	60	4.6	ND	0.0500	ND	0.1250	0.1050	0.1050	1.4900	1.4900	3.8400	3.8400
Relative Percent Difference (RPD)			ND									
09/18/18	187	1.3	ND	0.0500	ND	0.1250	0.1320	0.1320	ND	0.0500	0.1420	0.1420
09/18/18 <sub>a</sub>	187	1.3	*	*	*	*	*	*	*	*	*	*
Relative Percent Difference (RPD)			ND									
09/26/18	132	2.4	ND	0.0500	ND	0.1250	0.1510	0.1510	0.4270	0.4270	0.8060	0.8060
09/26/18 <sub>a</sub>	132	2.4	ND	0.0500	ND	0.1250	0.1460	0.1460	0.4280	0.4280	0.7770	0.7770
Relative Percent Difference (RPD)			ND									
			3.3670									
			-0.2339									
			3.6639									

d - Duplicate sample taken in addition to the routine sample (See Calculation Methodology for information on inclusion of duplicate sample results.)

\* - non operational, data from the North site was used for Wind Direction and Wind Speed, if available

**Summary of Non-operational Periods  
3rd QUARTER 2018  
Point Comfort SUMMA Canister System**

SUMMA Site	Date (s)	Description of Problem	Corrective Action
Park	9/24/18 9/30/18	Unable to swap canister due to significantly high grass at Park Site.	
City Hall & Formosa Training Complex	9/18/18	Samples did not run due unknown reasons.	AECOM was unable to verify the cause. Next run was successful.
PC	8/23/18	Samples did not run due to unknown reason.	AECOM was unable to verify the cause. Next run was successful.
PC	8/11/18	Sample leaked below 25 prior to run.	
Park	9/12/18	Voided sample due to low pressure.	Adjusted flow controller to decrease amount sampled.
PC	8/19/18 8/31/18	Voided sample due to high final pressure.	

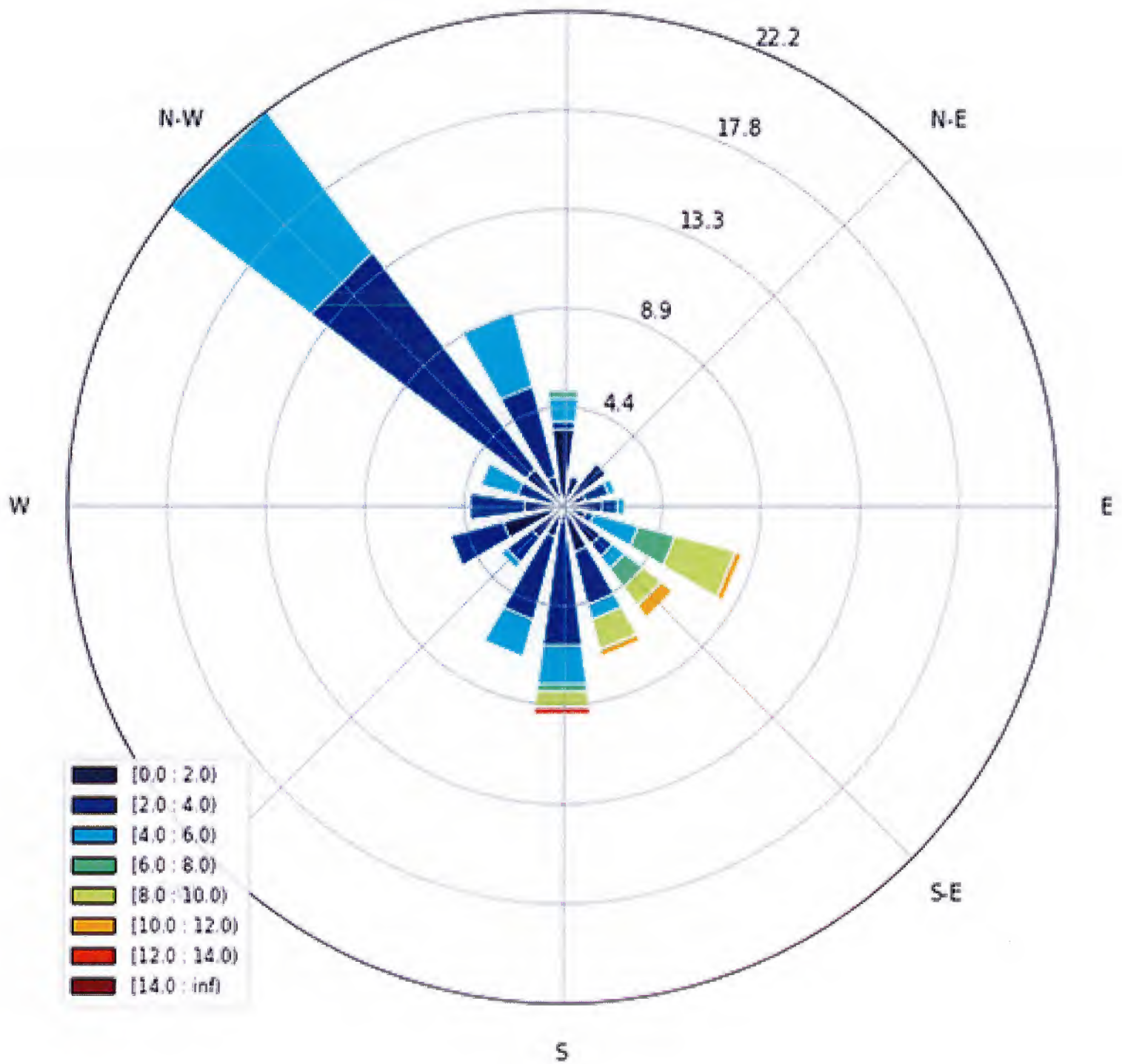




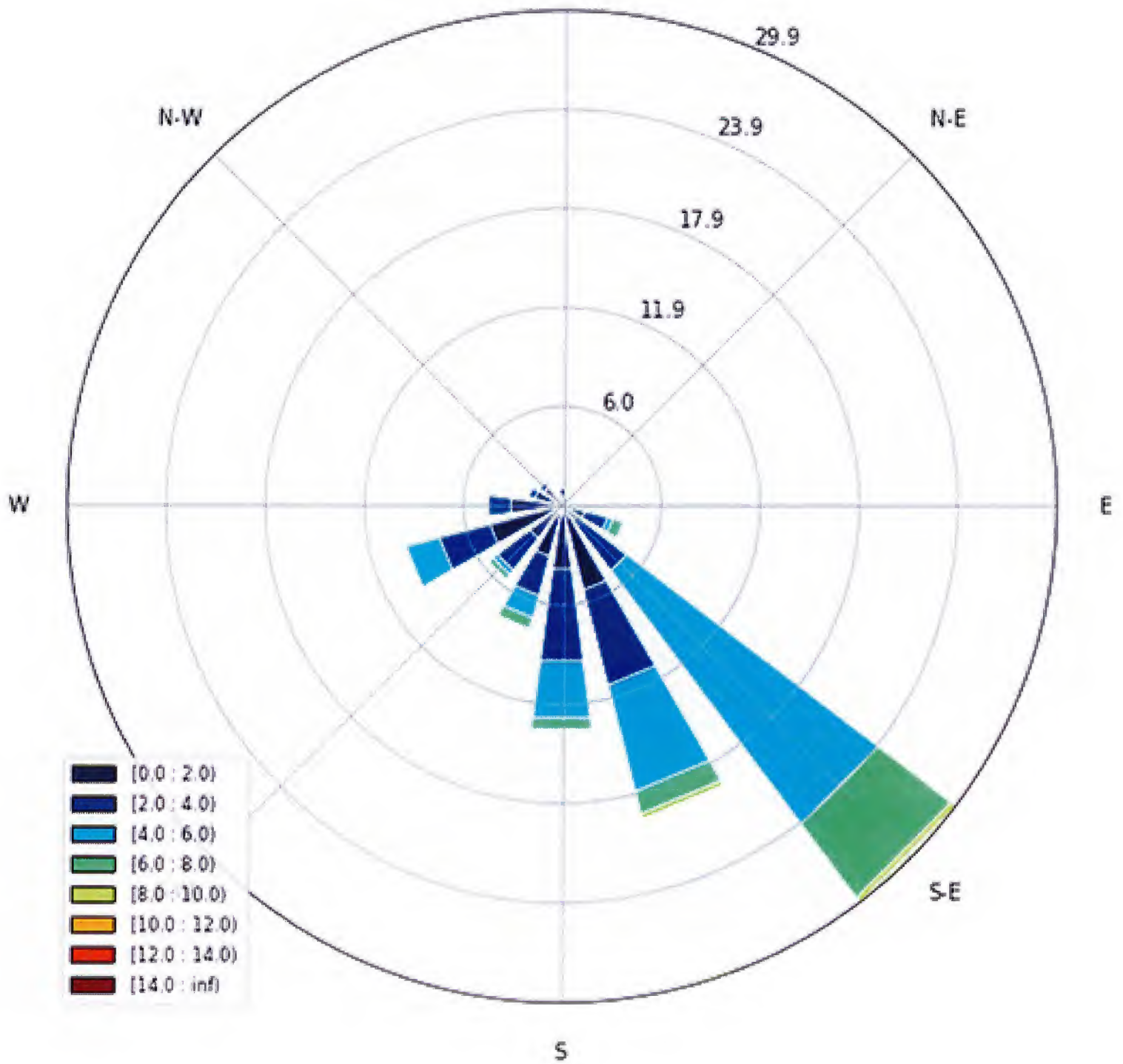




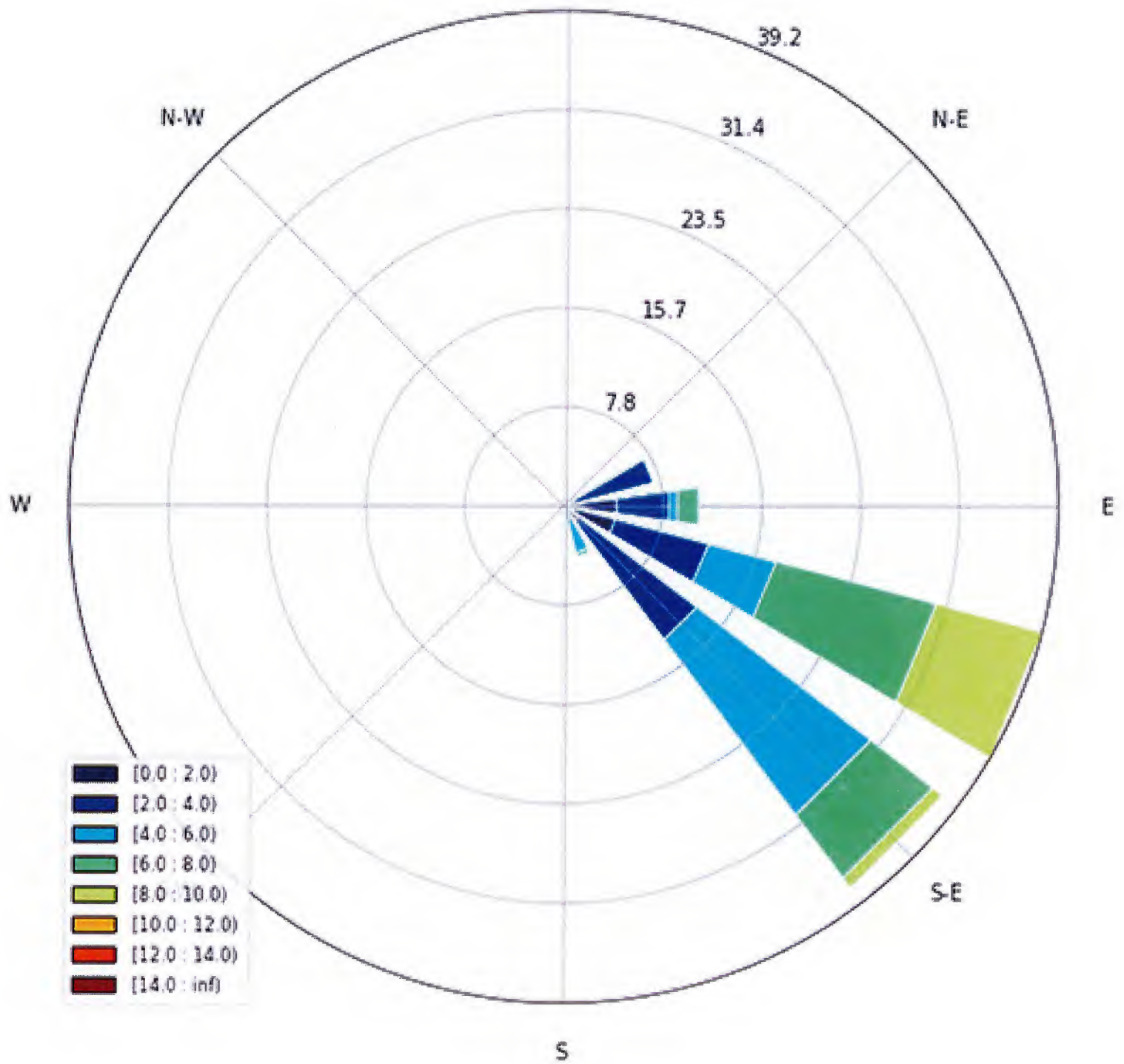
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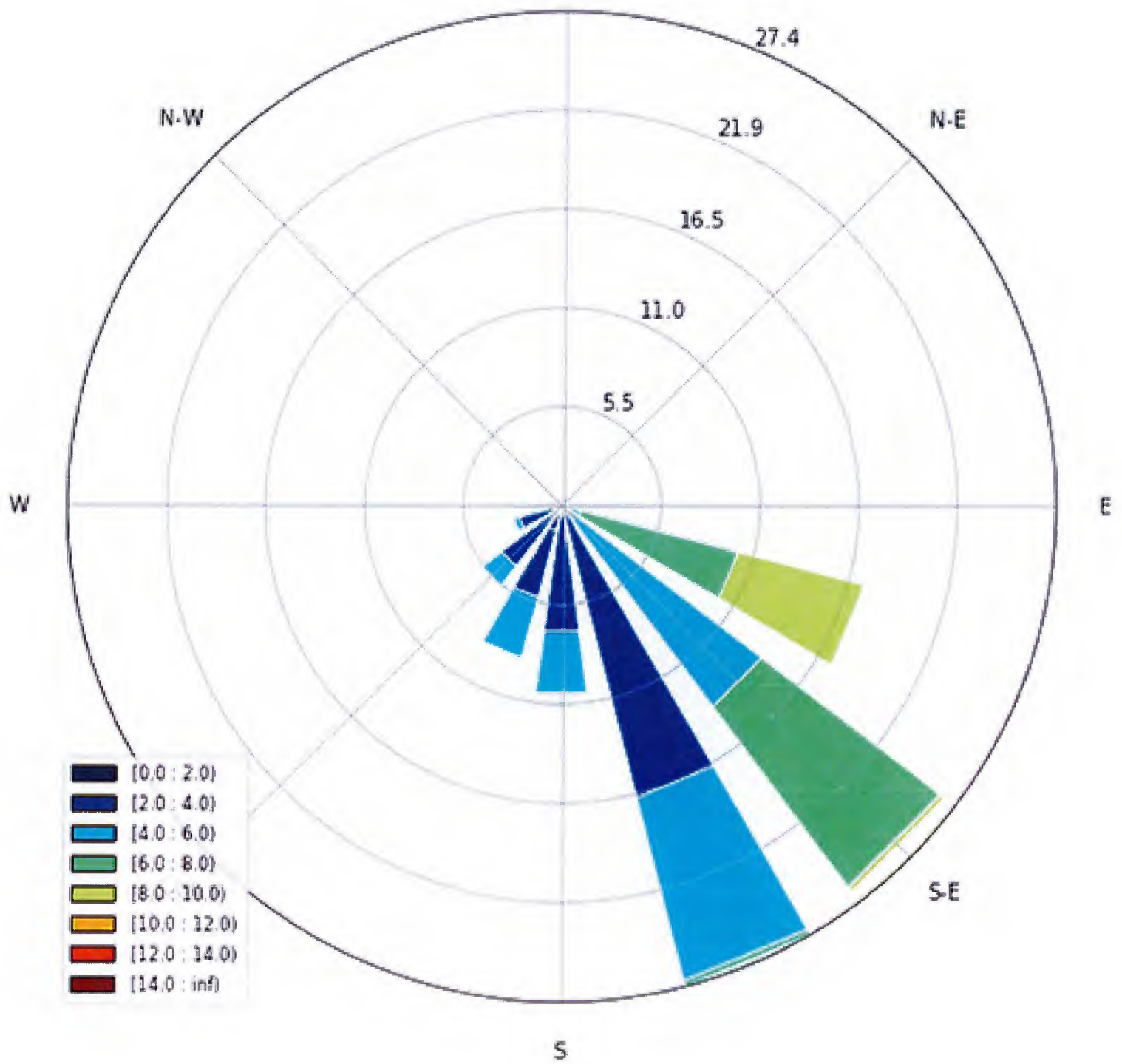


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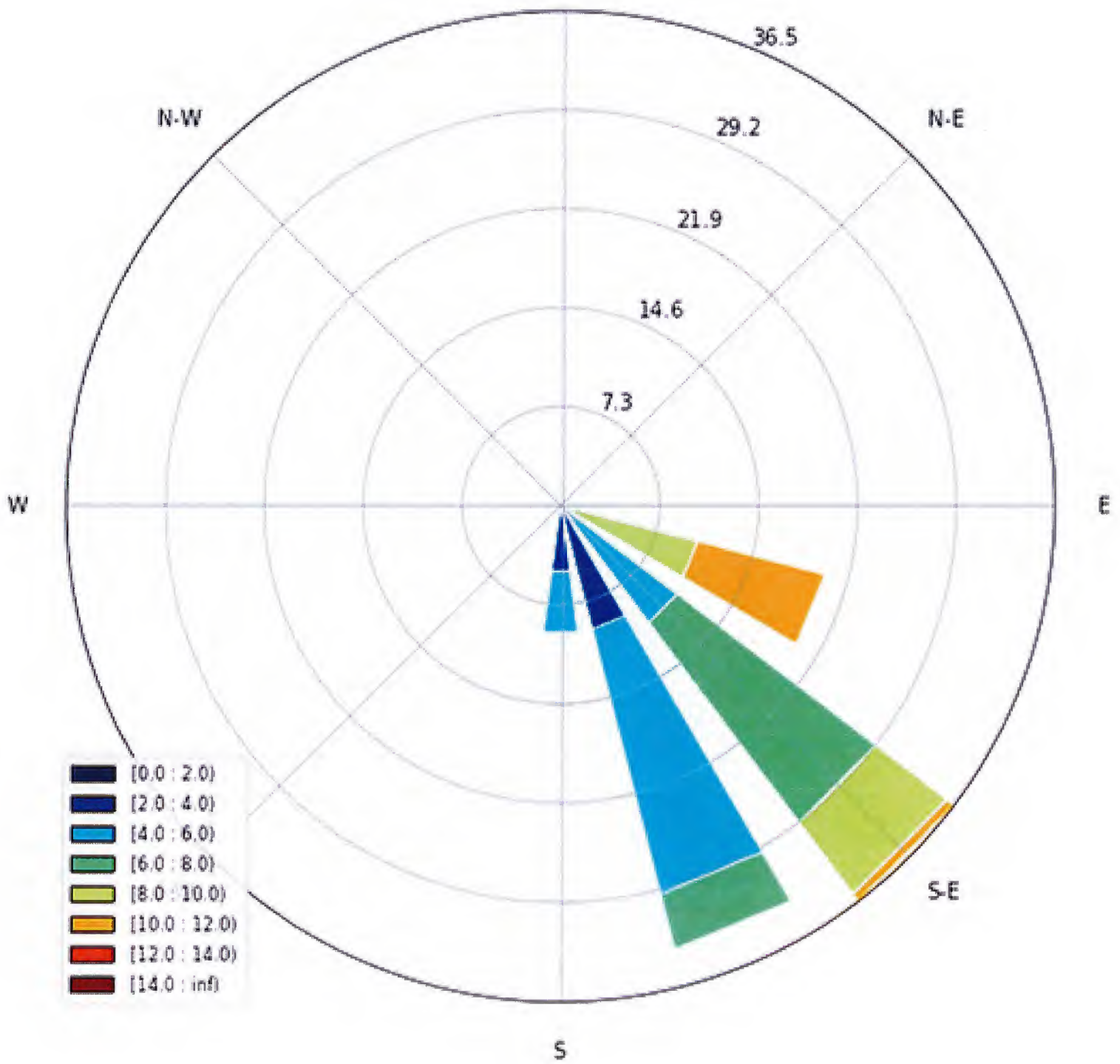




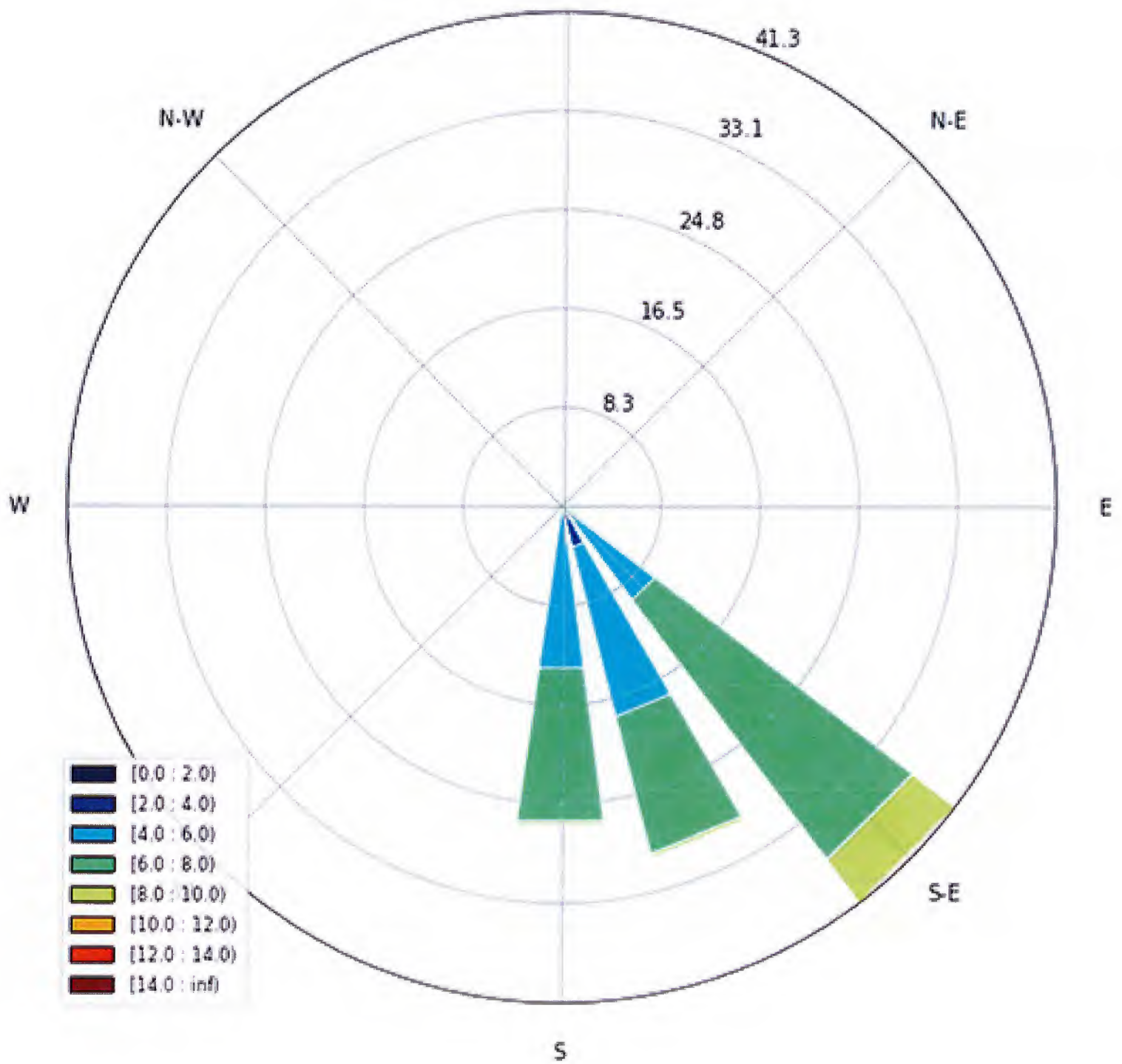
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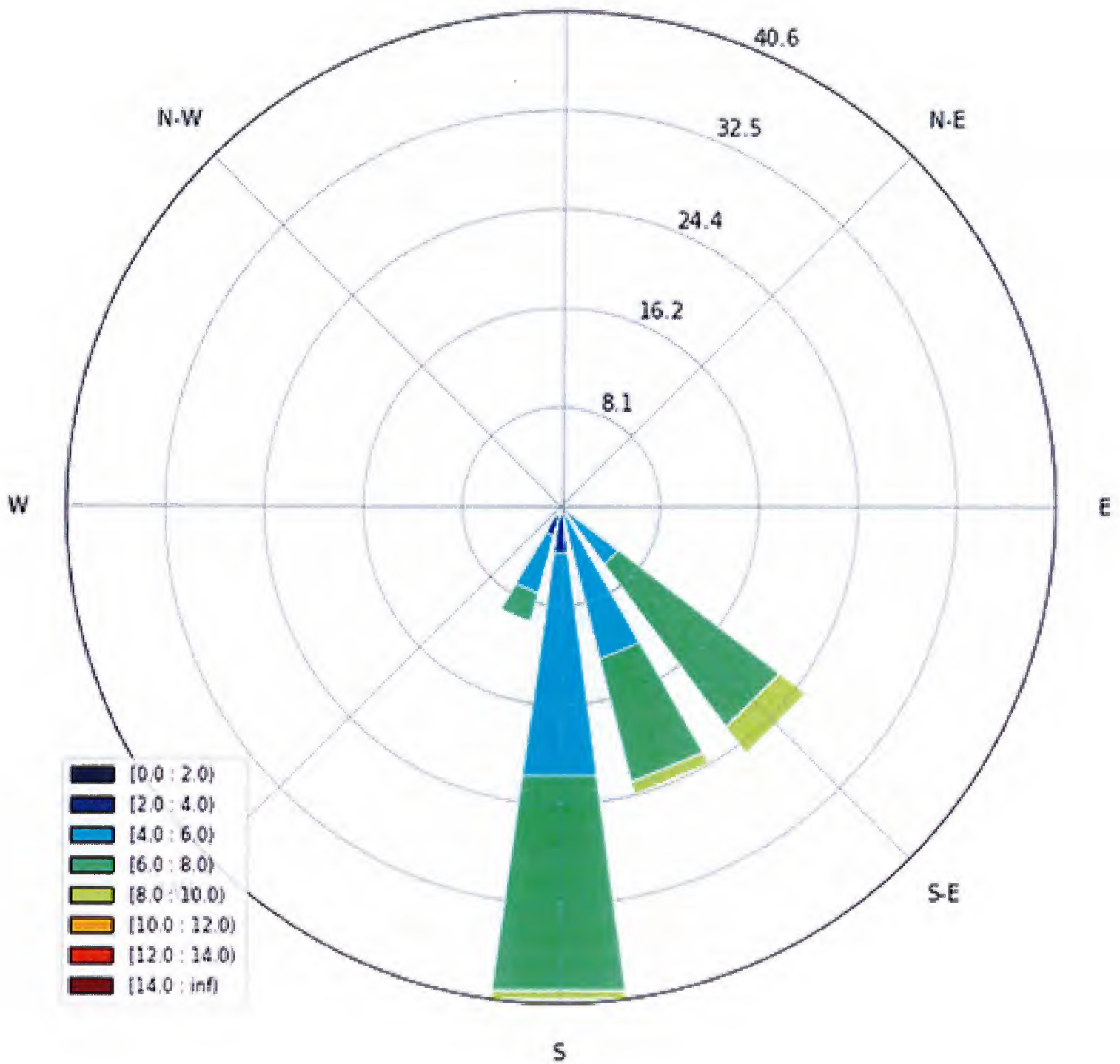


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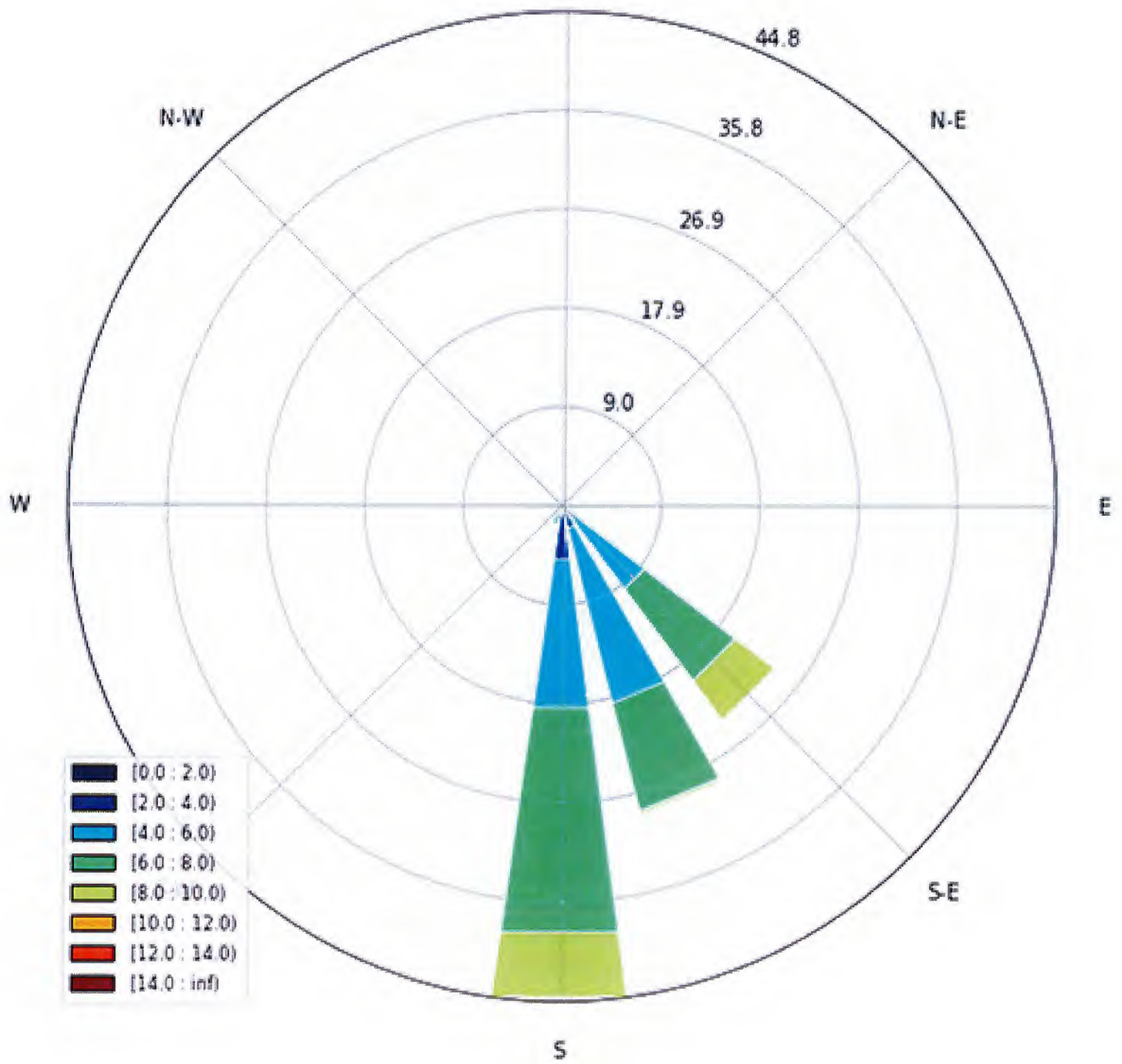


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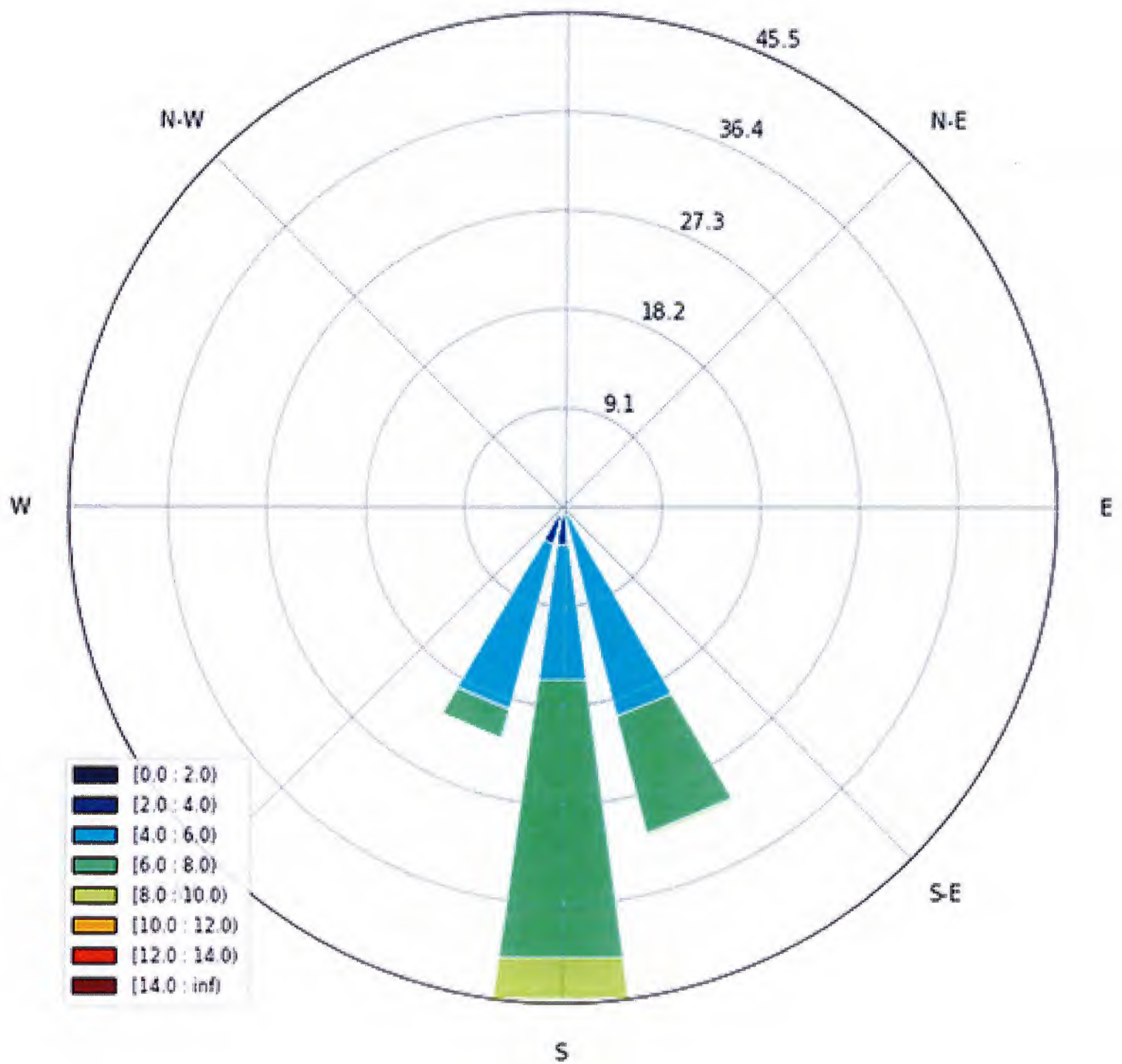




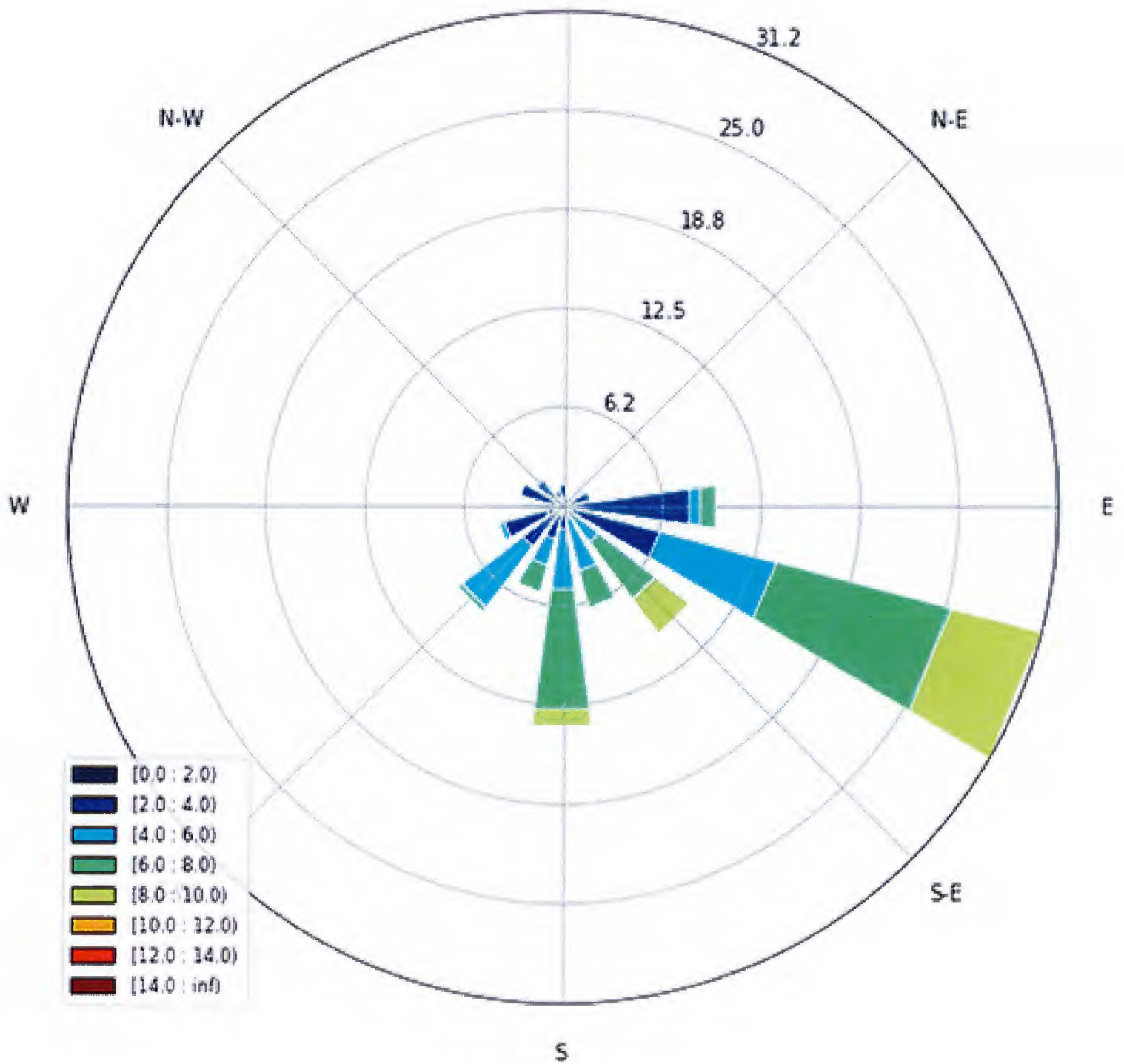
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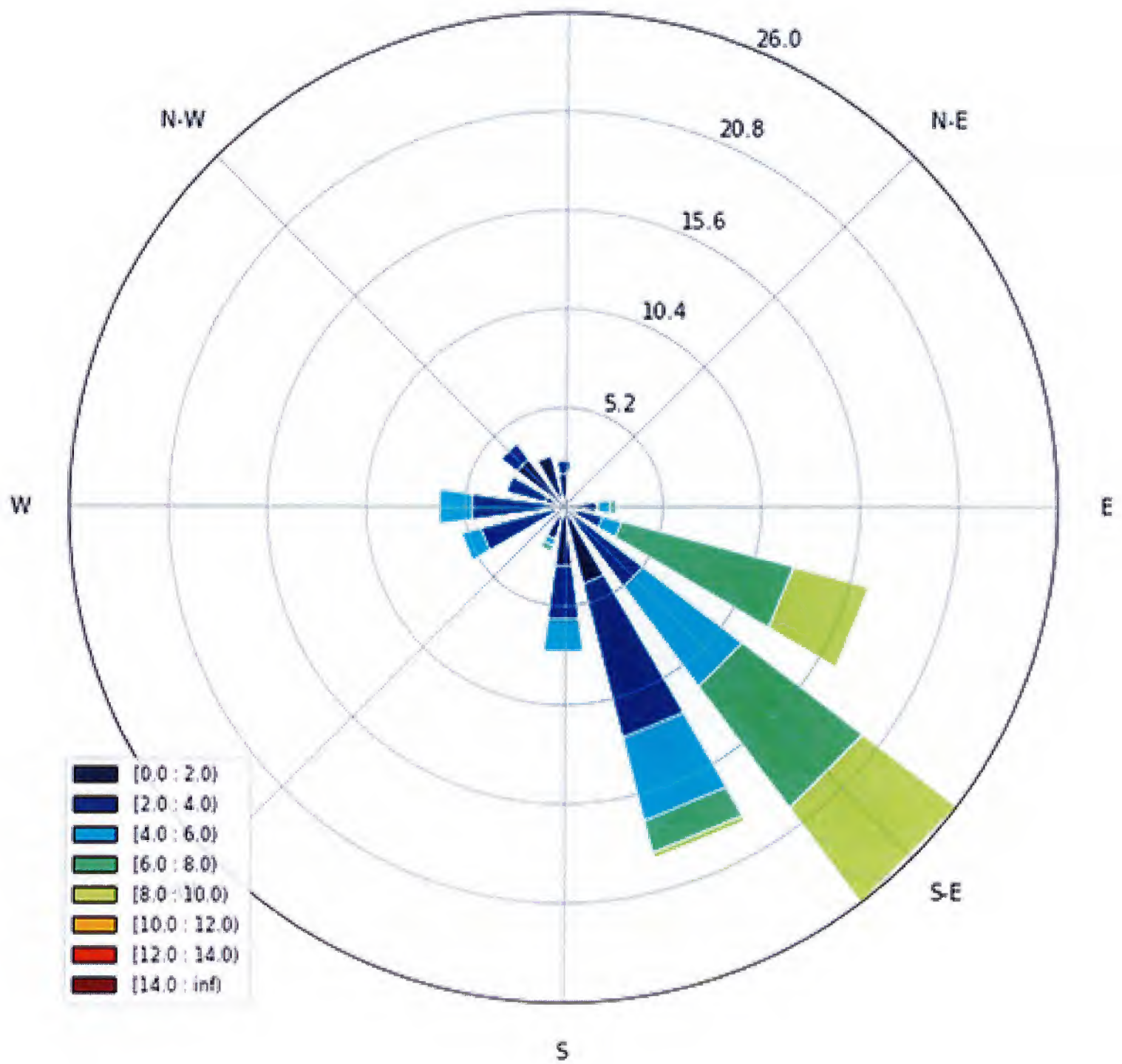


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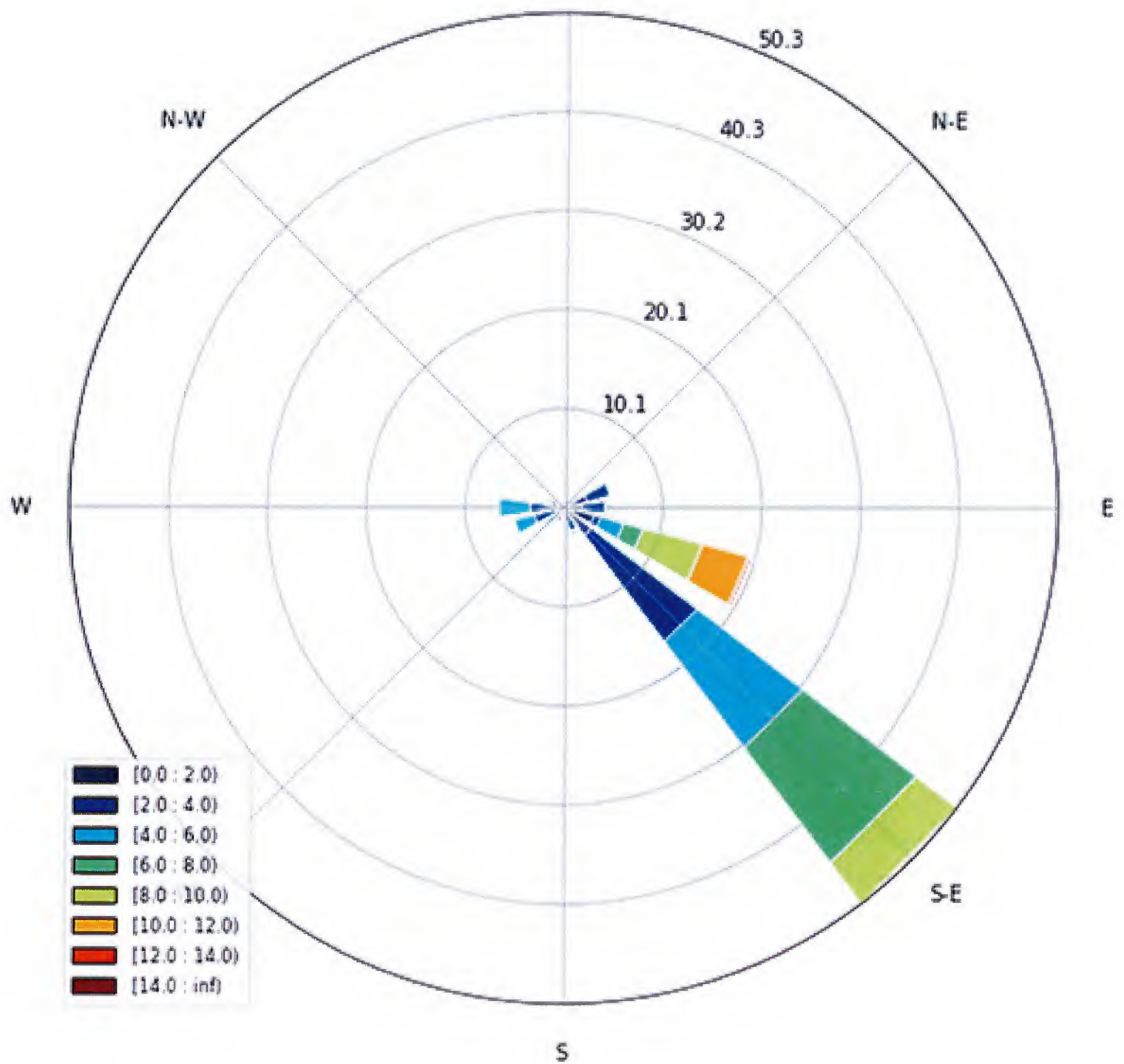


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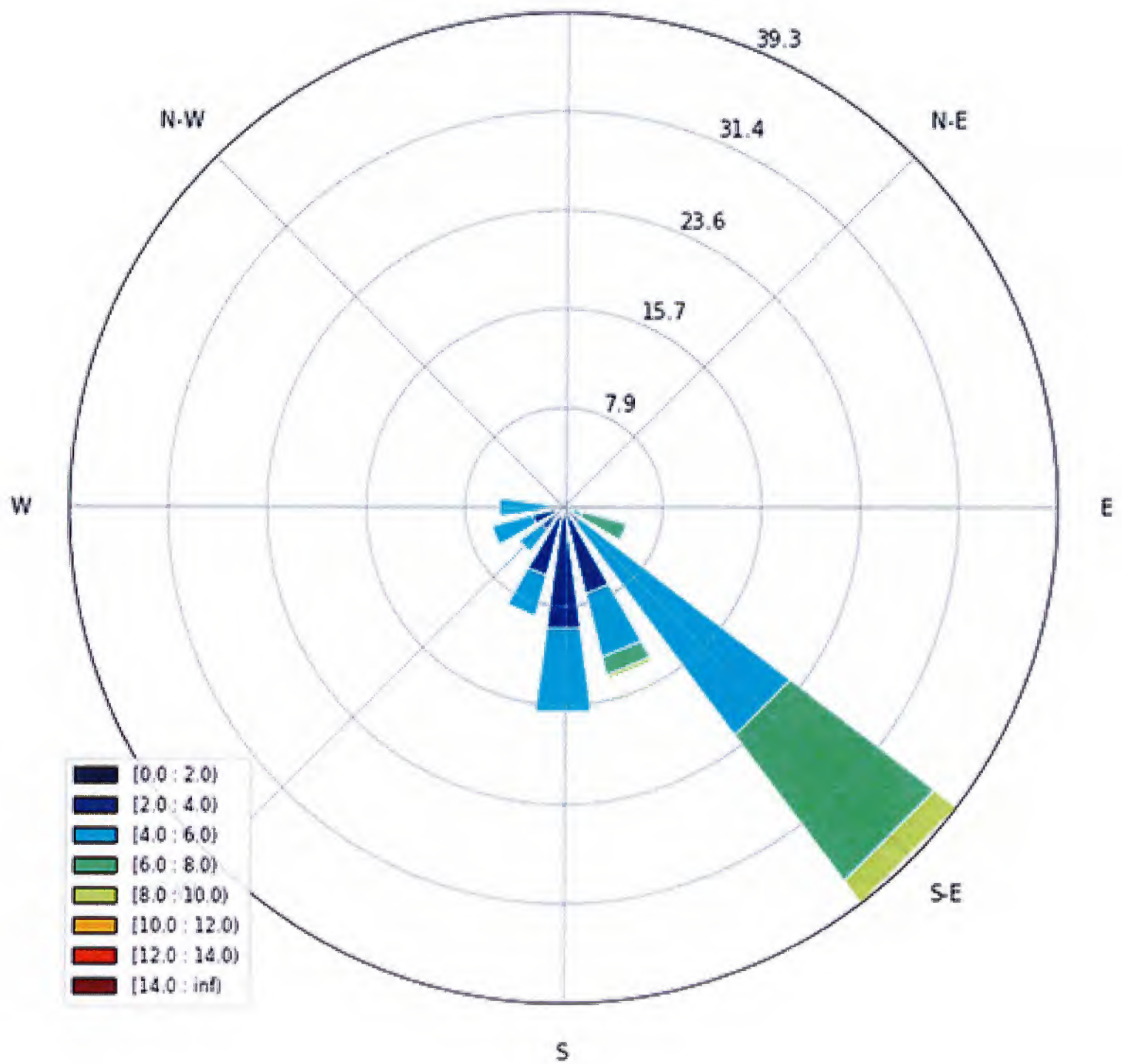




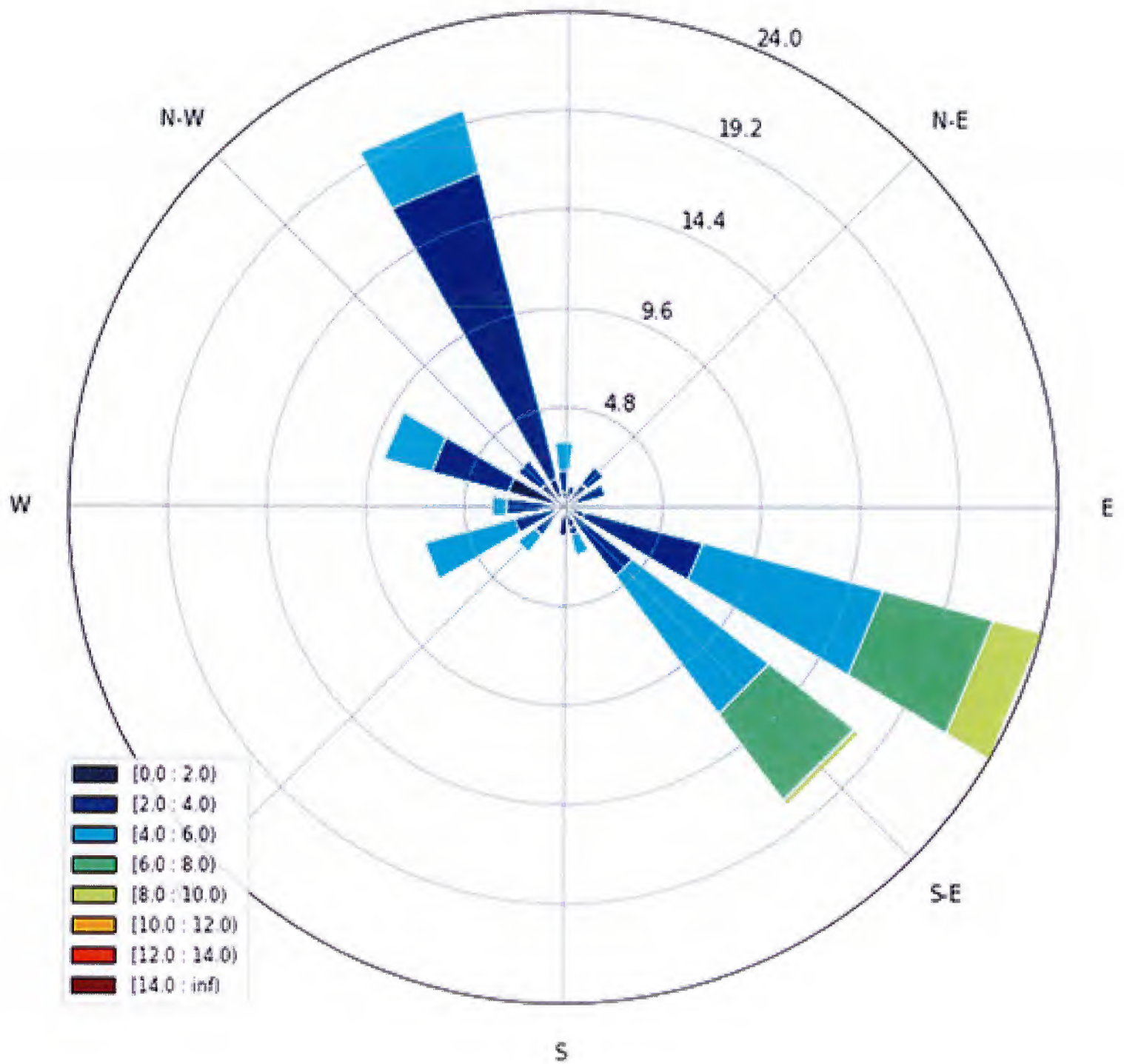
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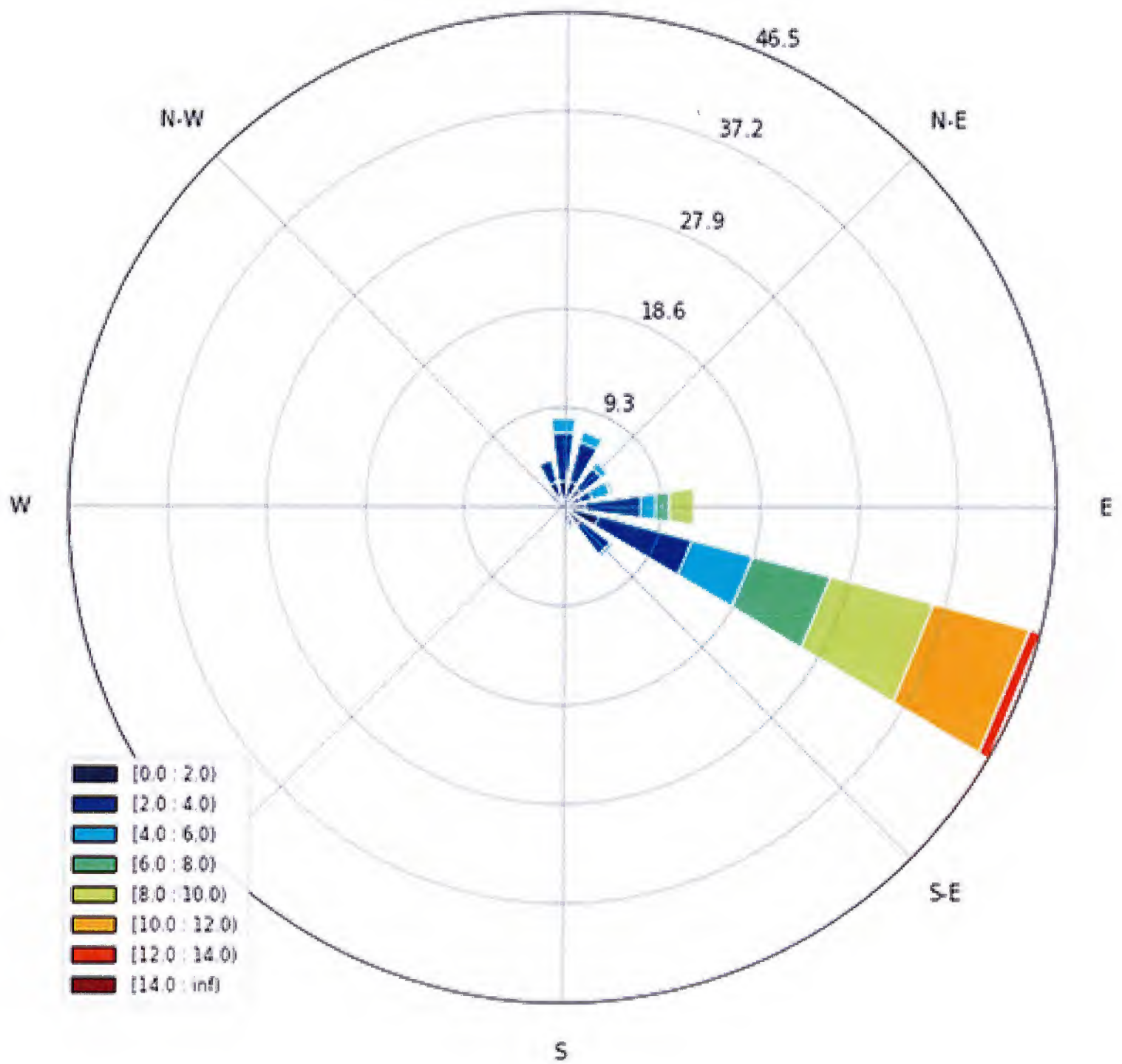


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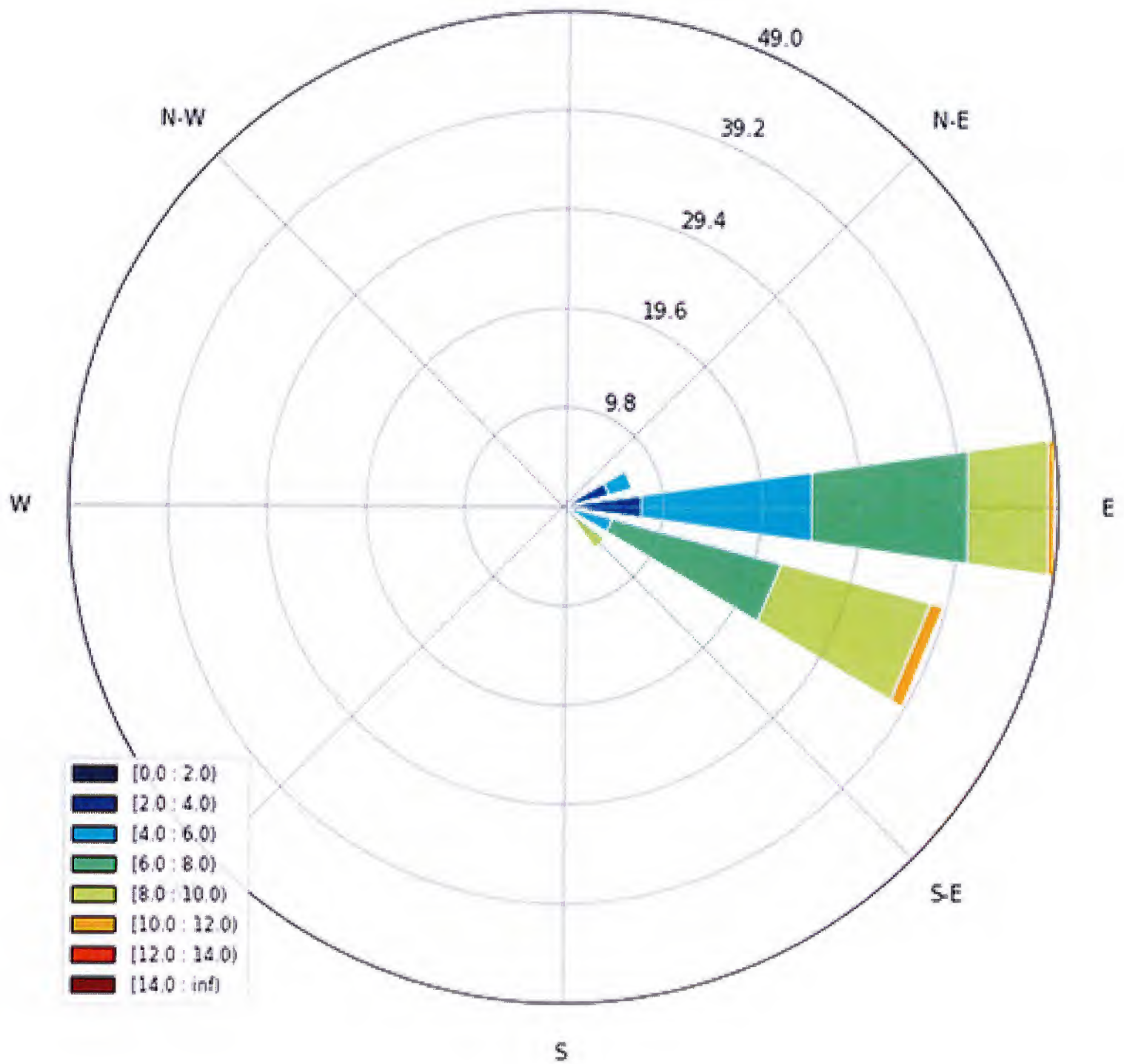




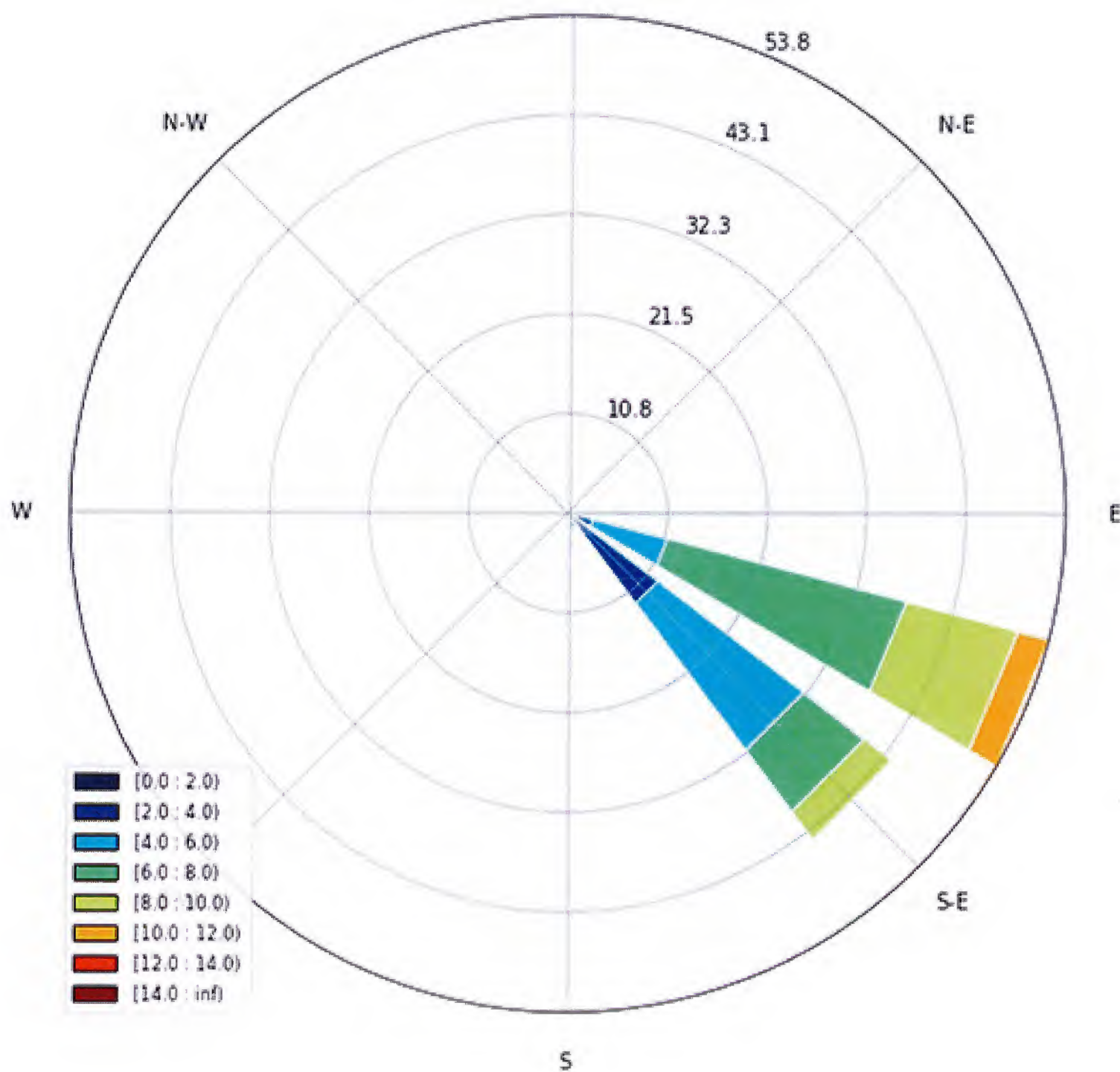
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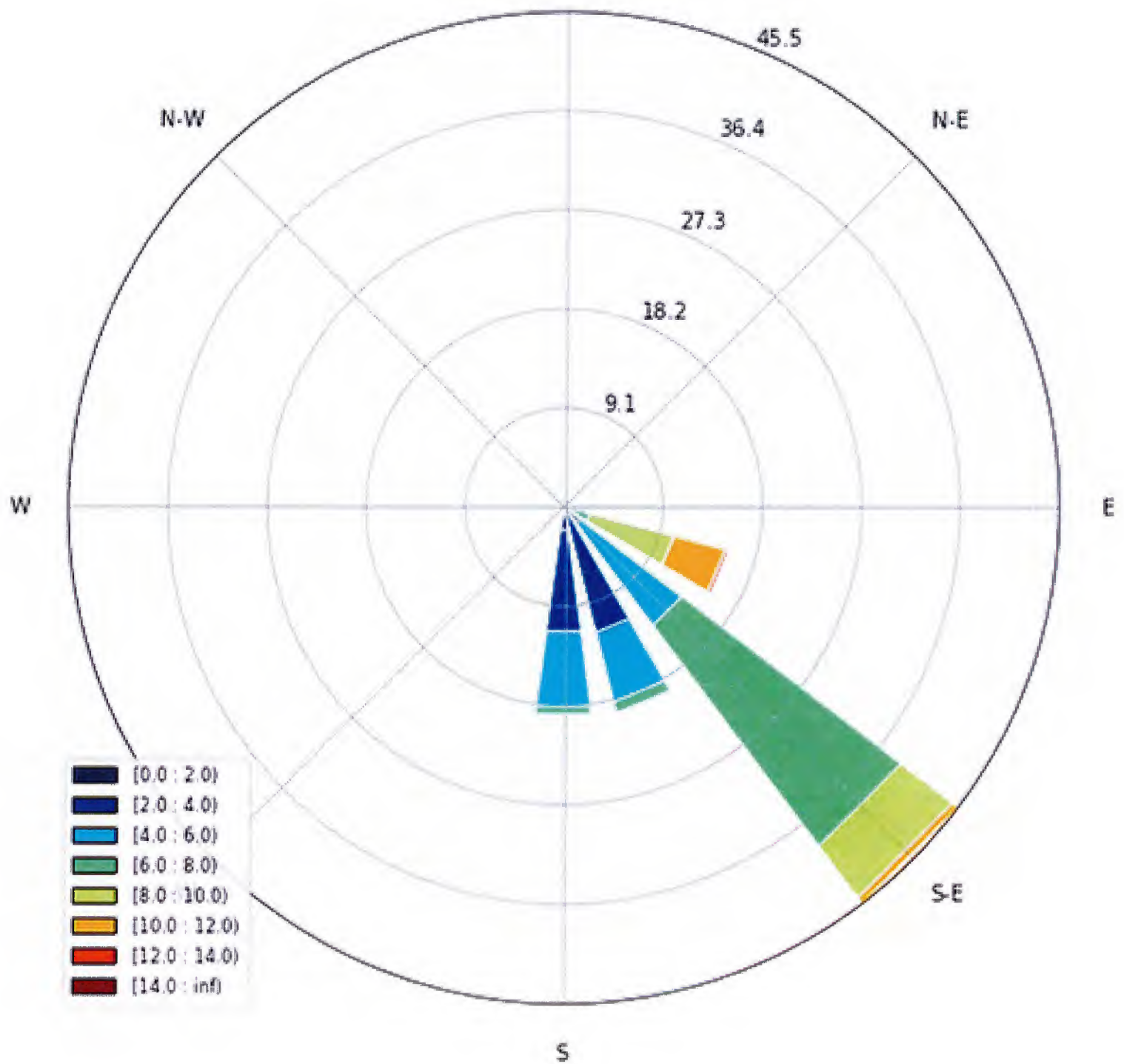


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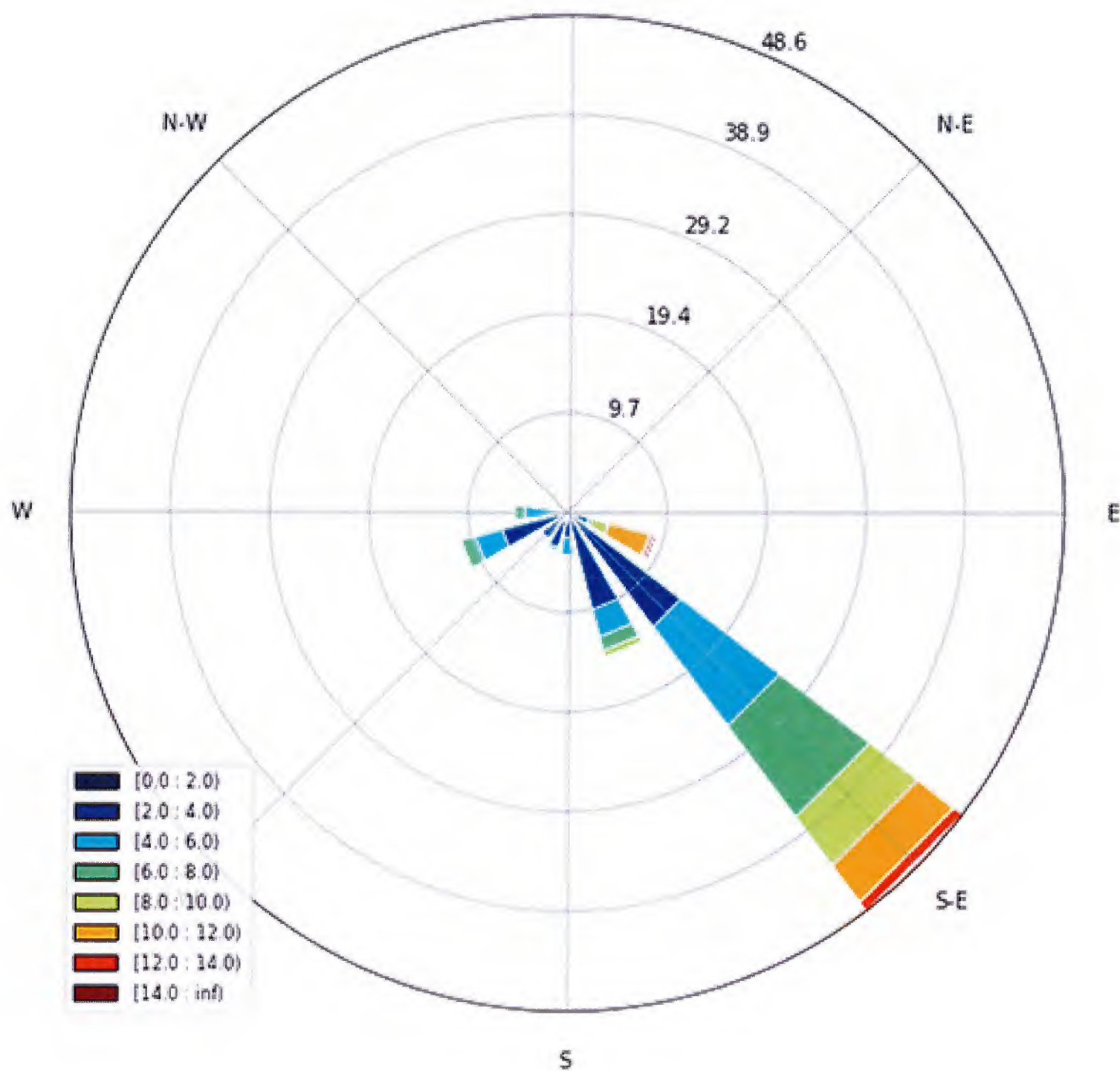




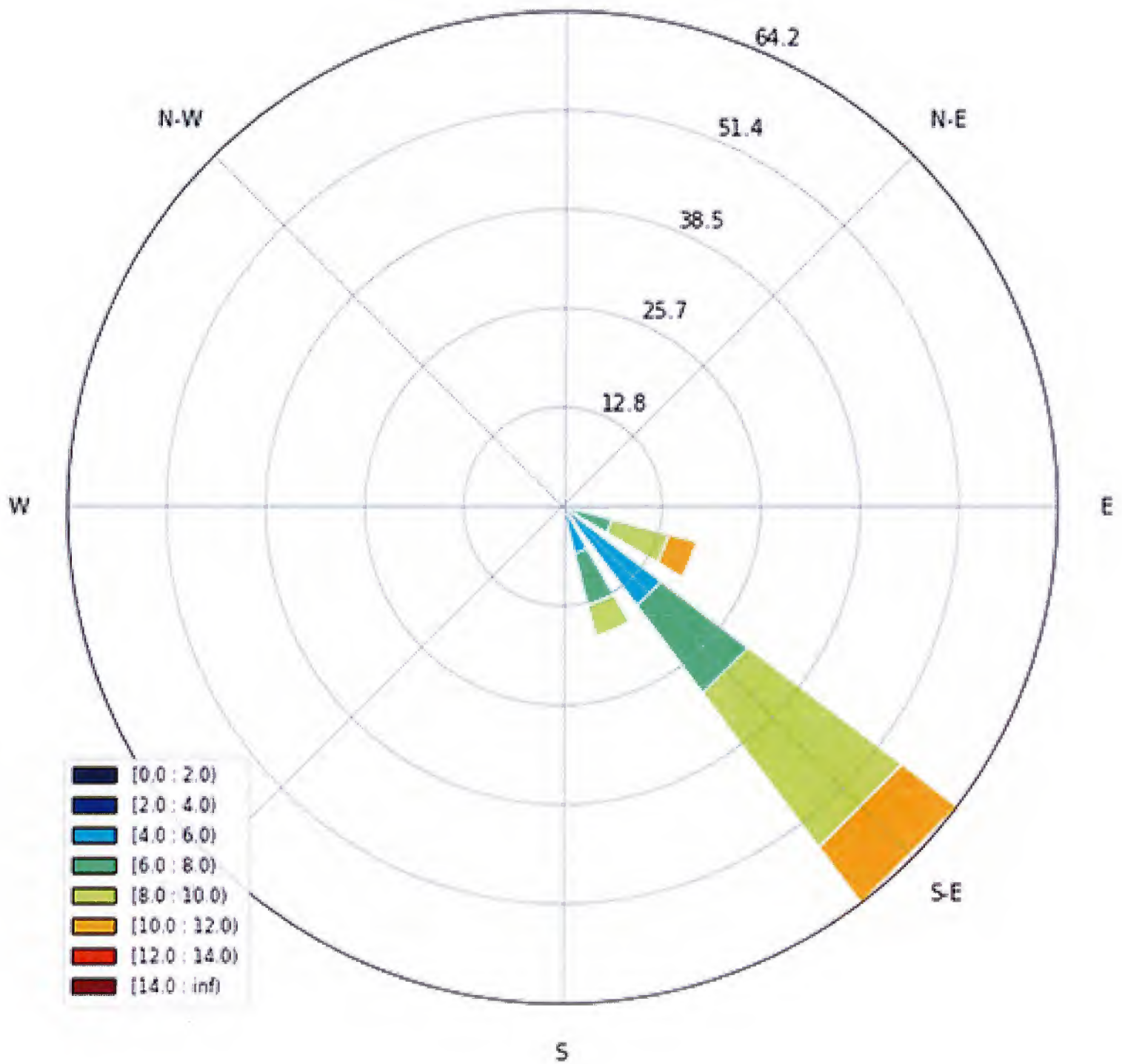
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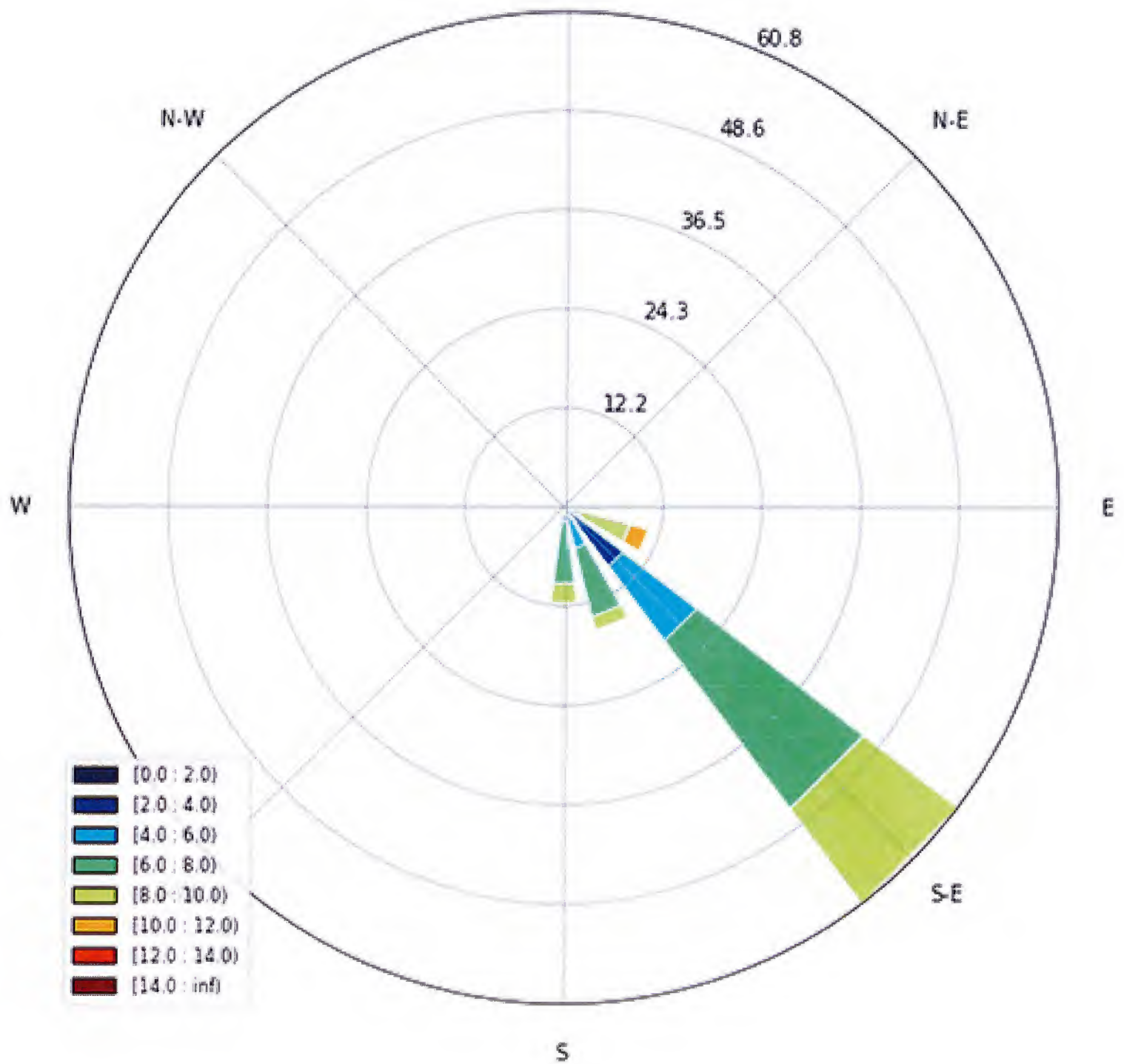
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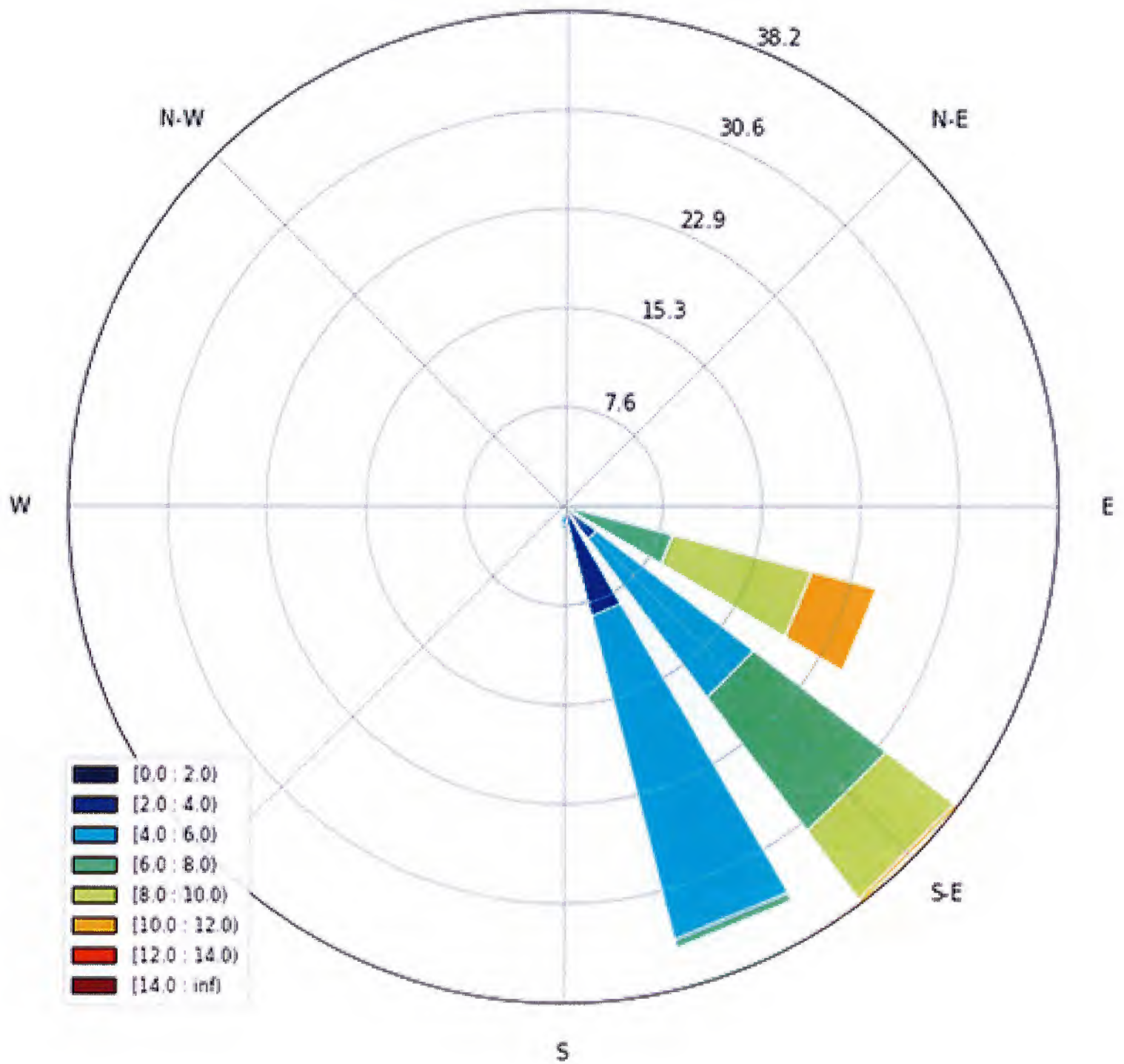
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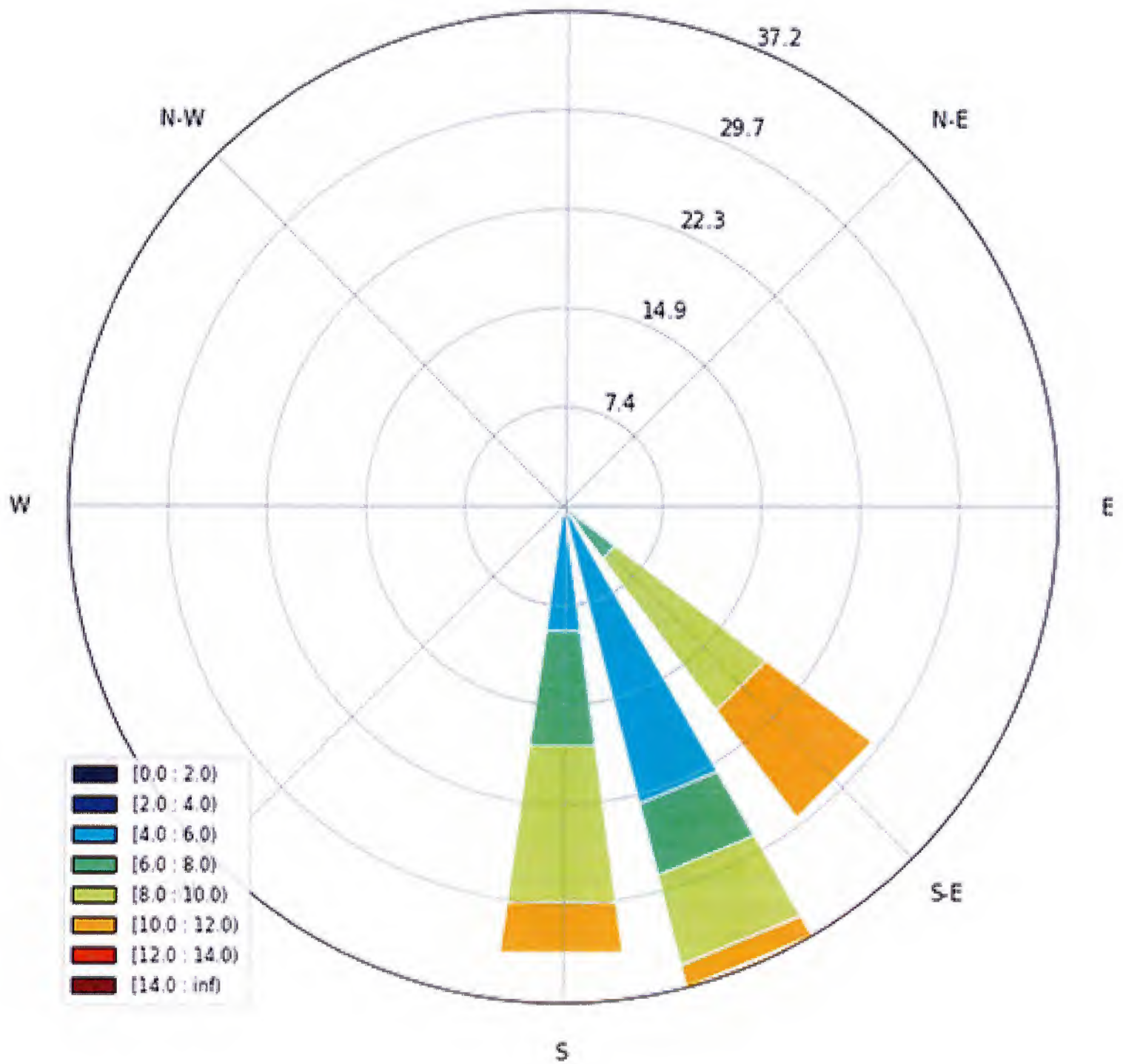




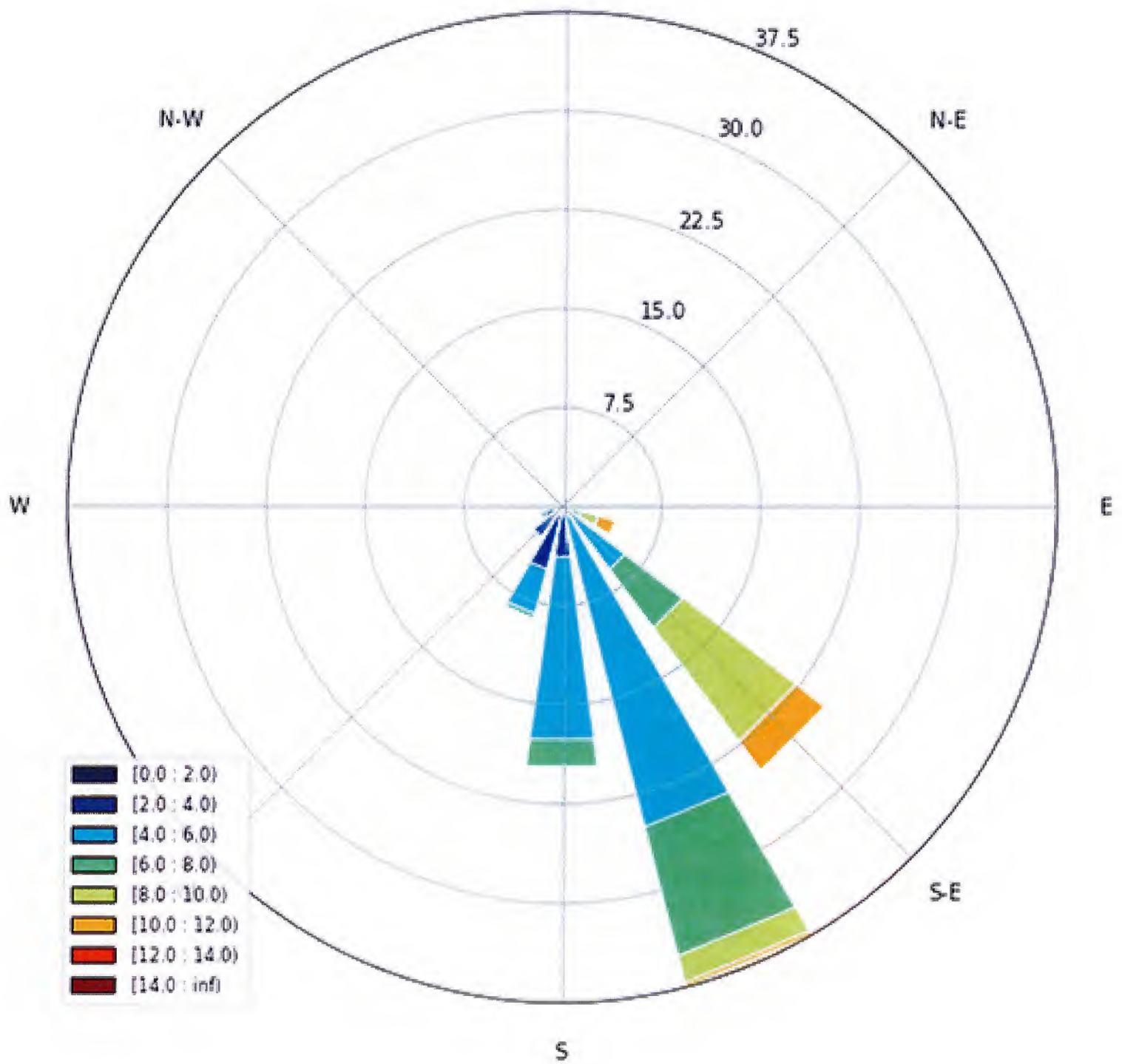
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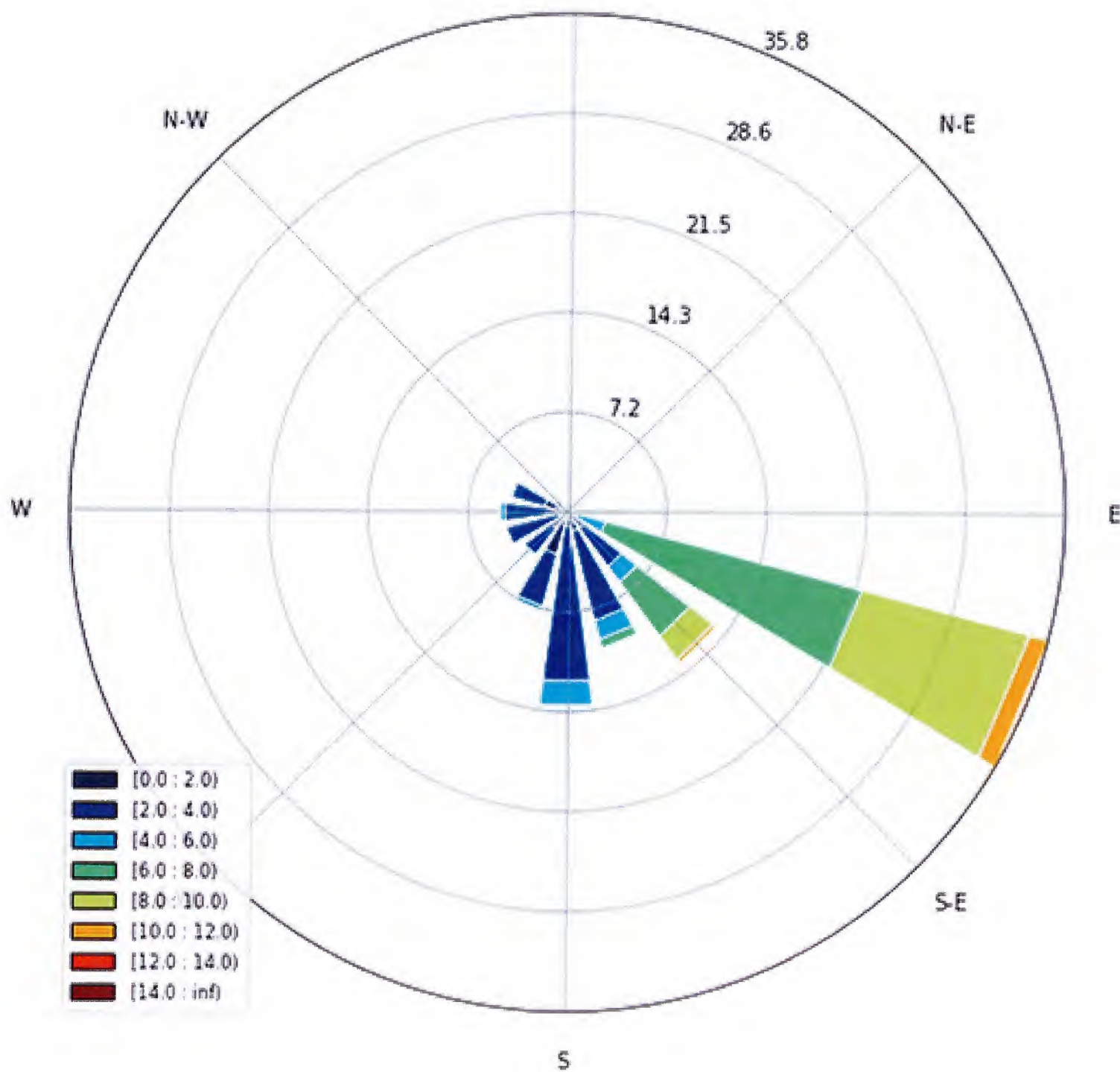
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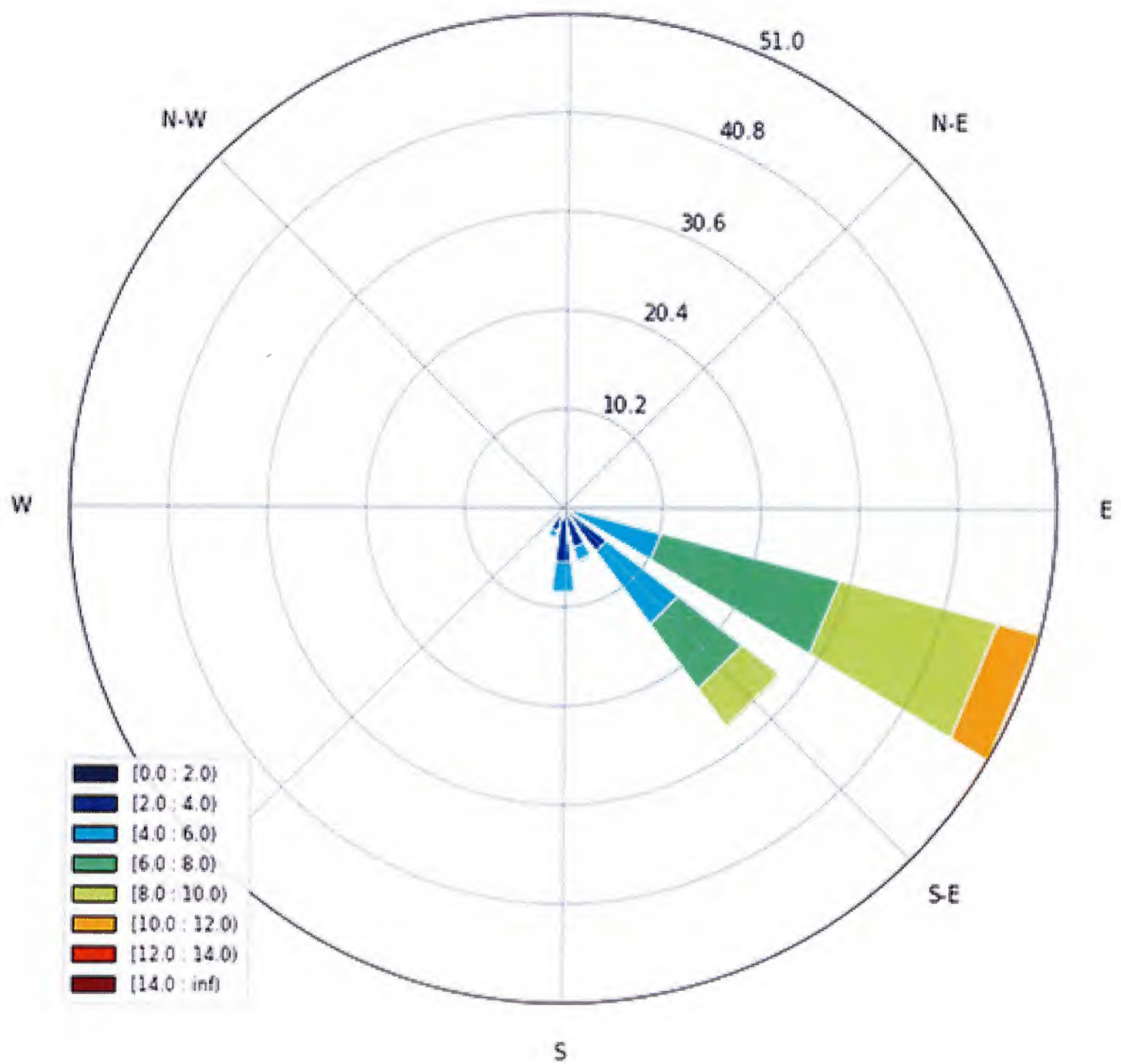




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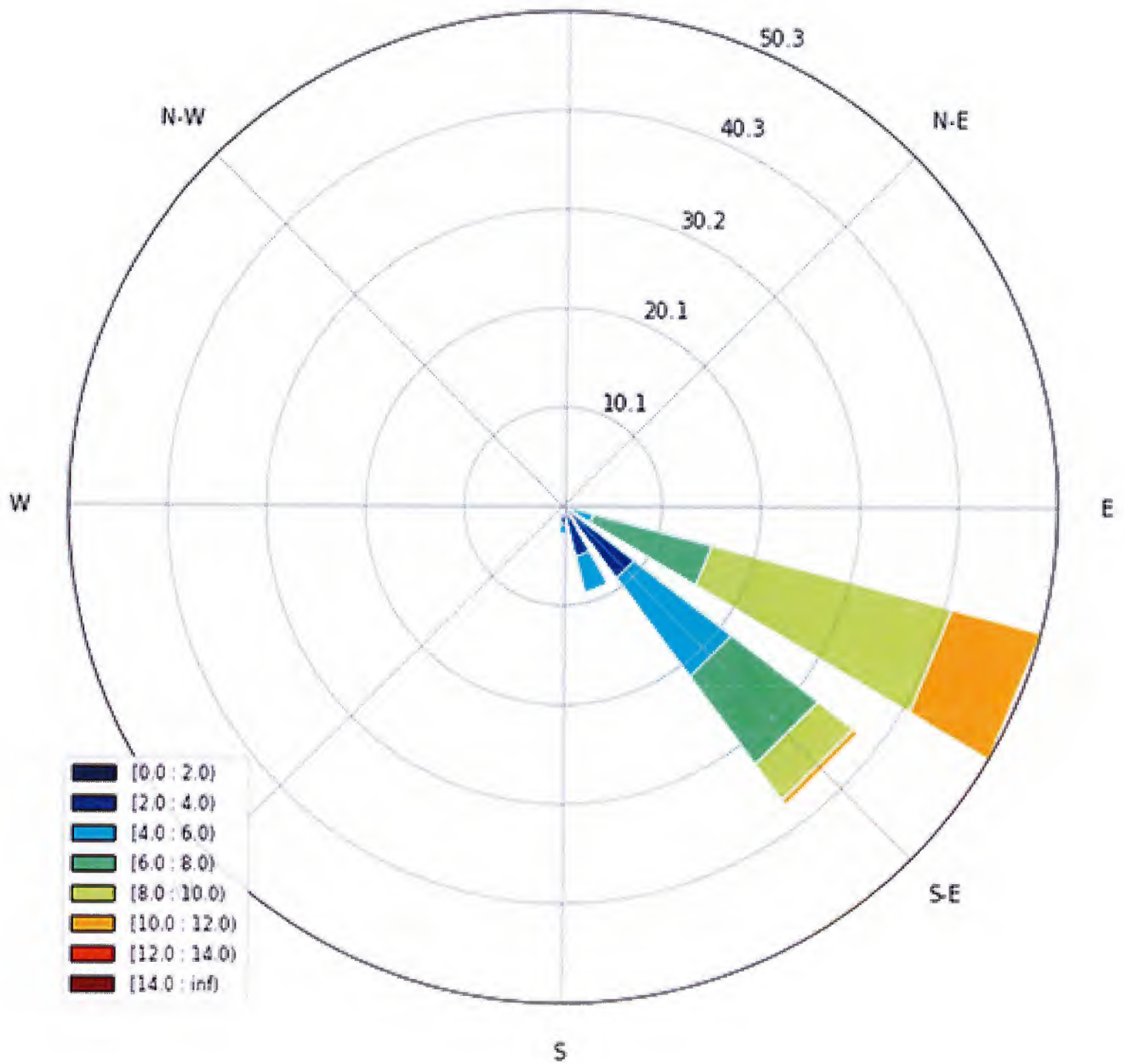


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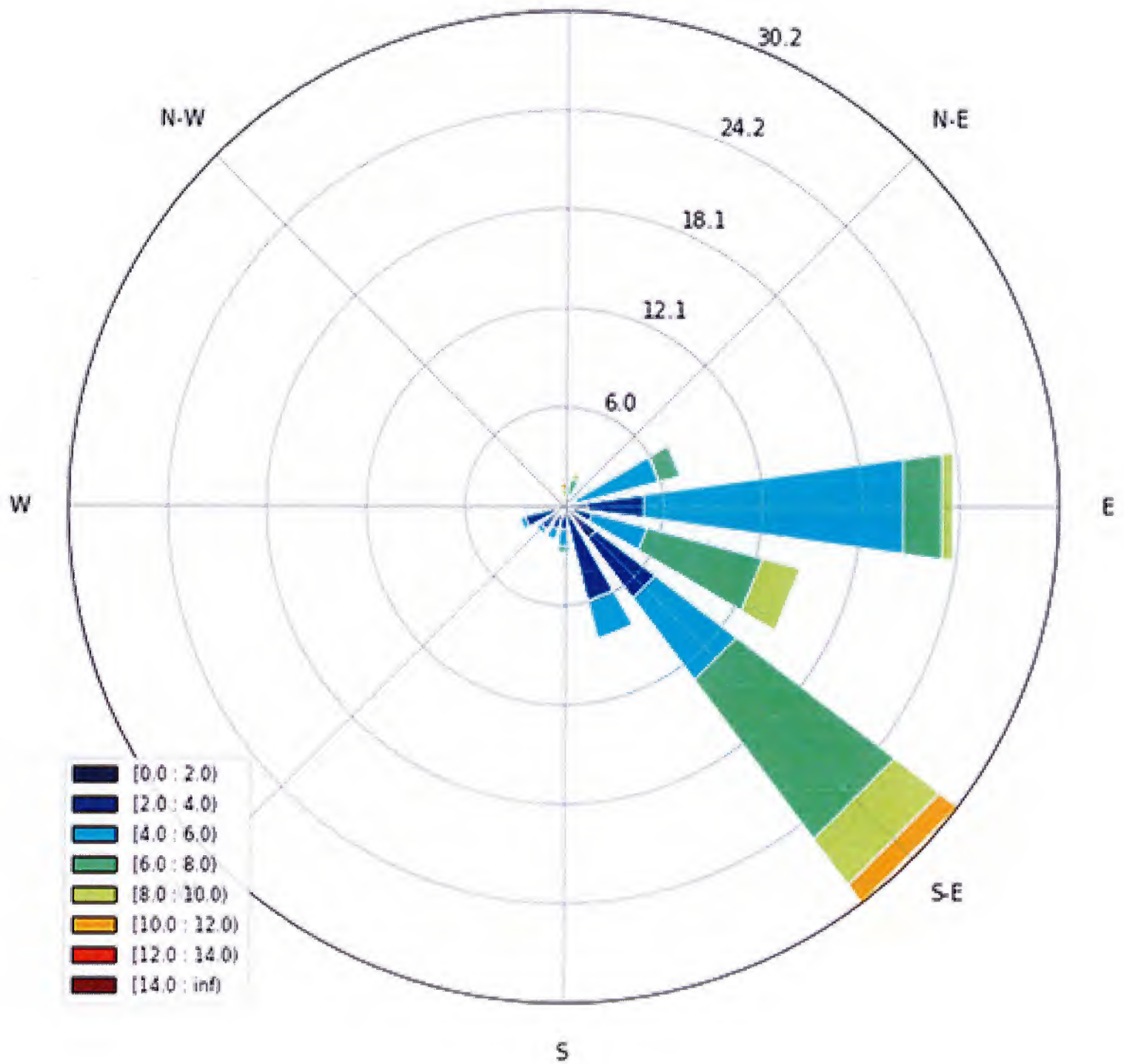




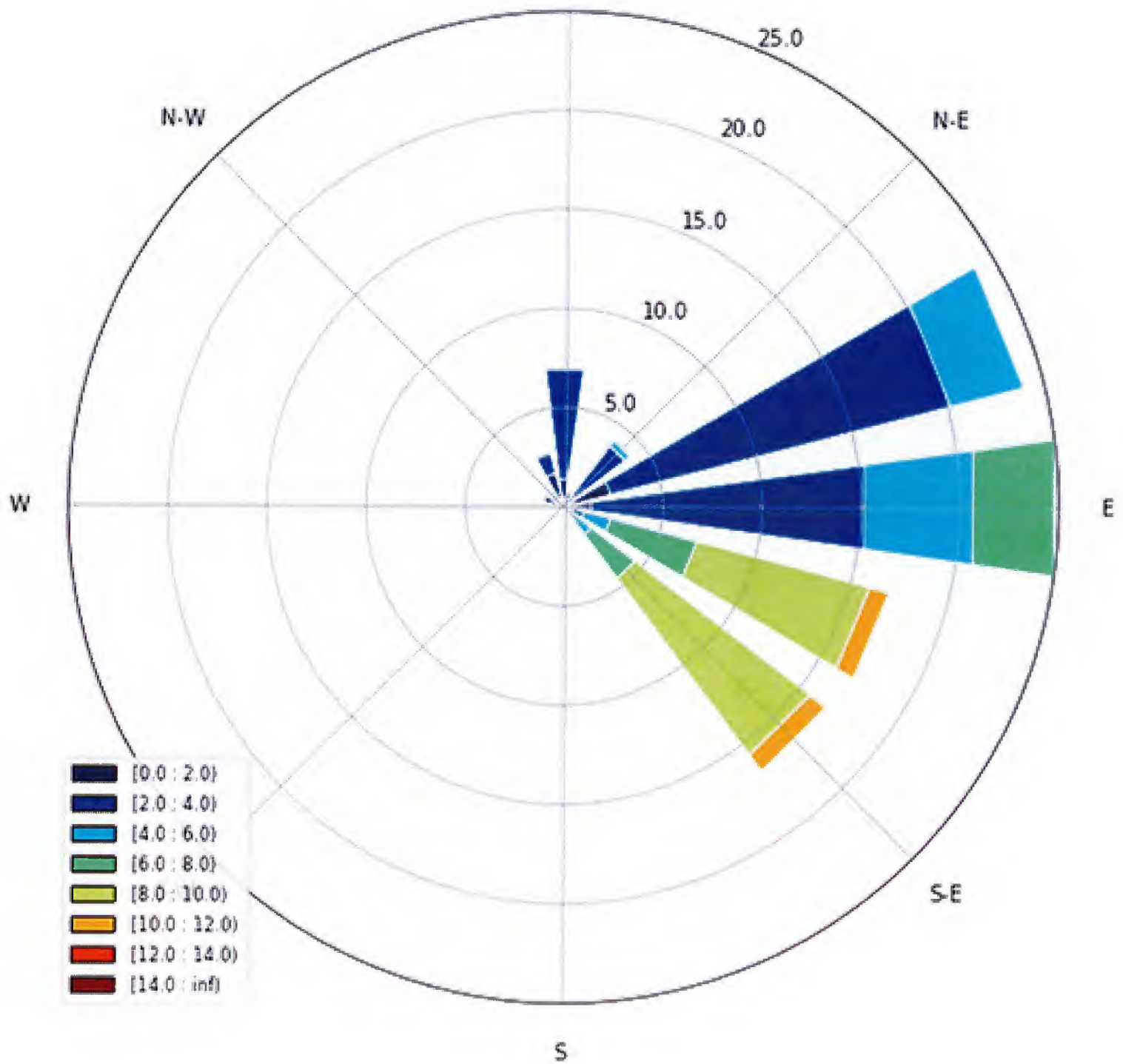
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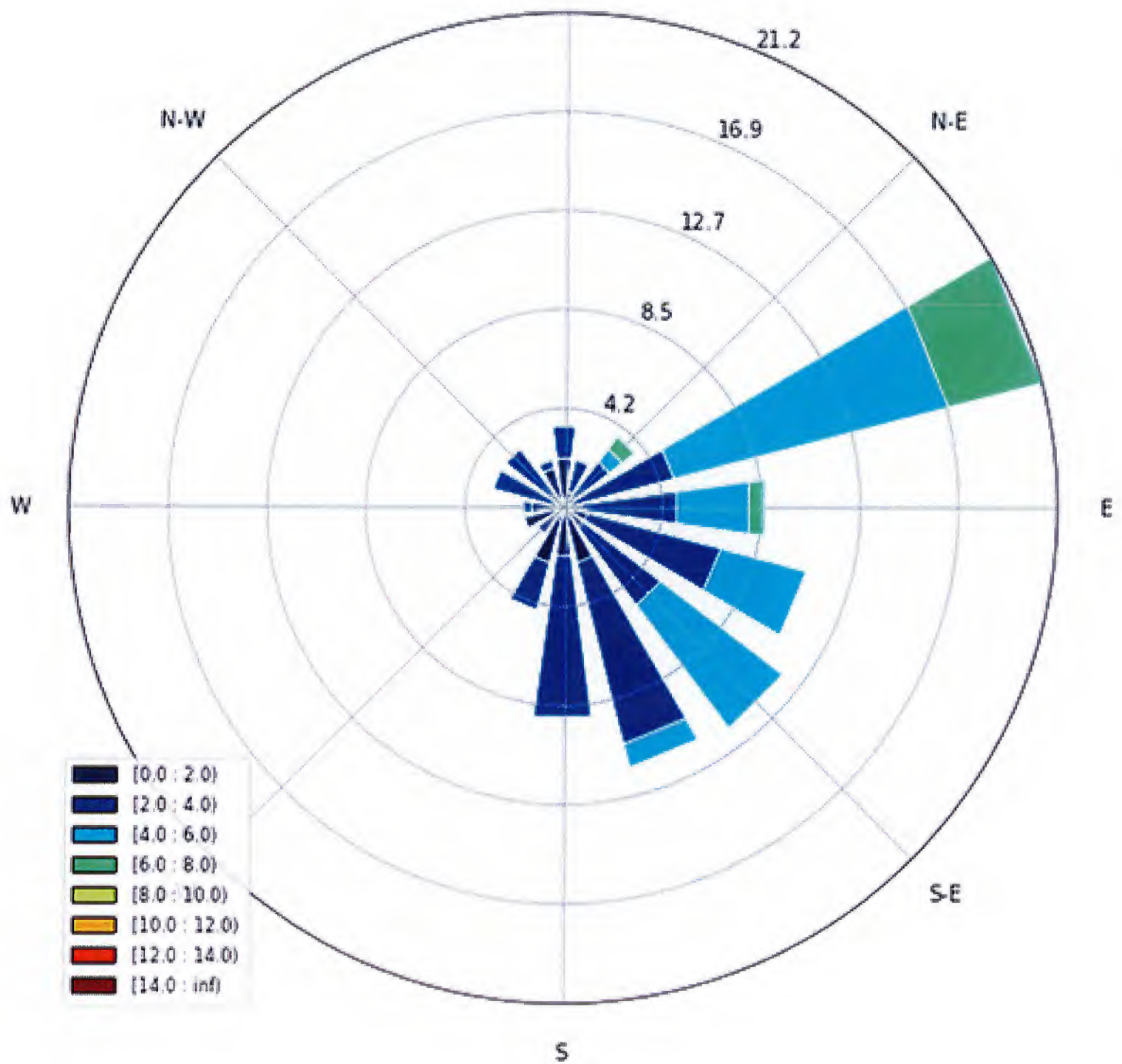


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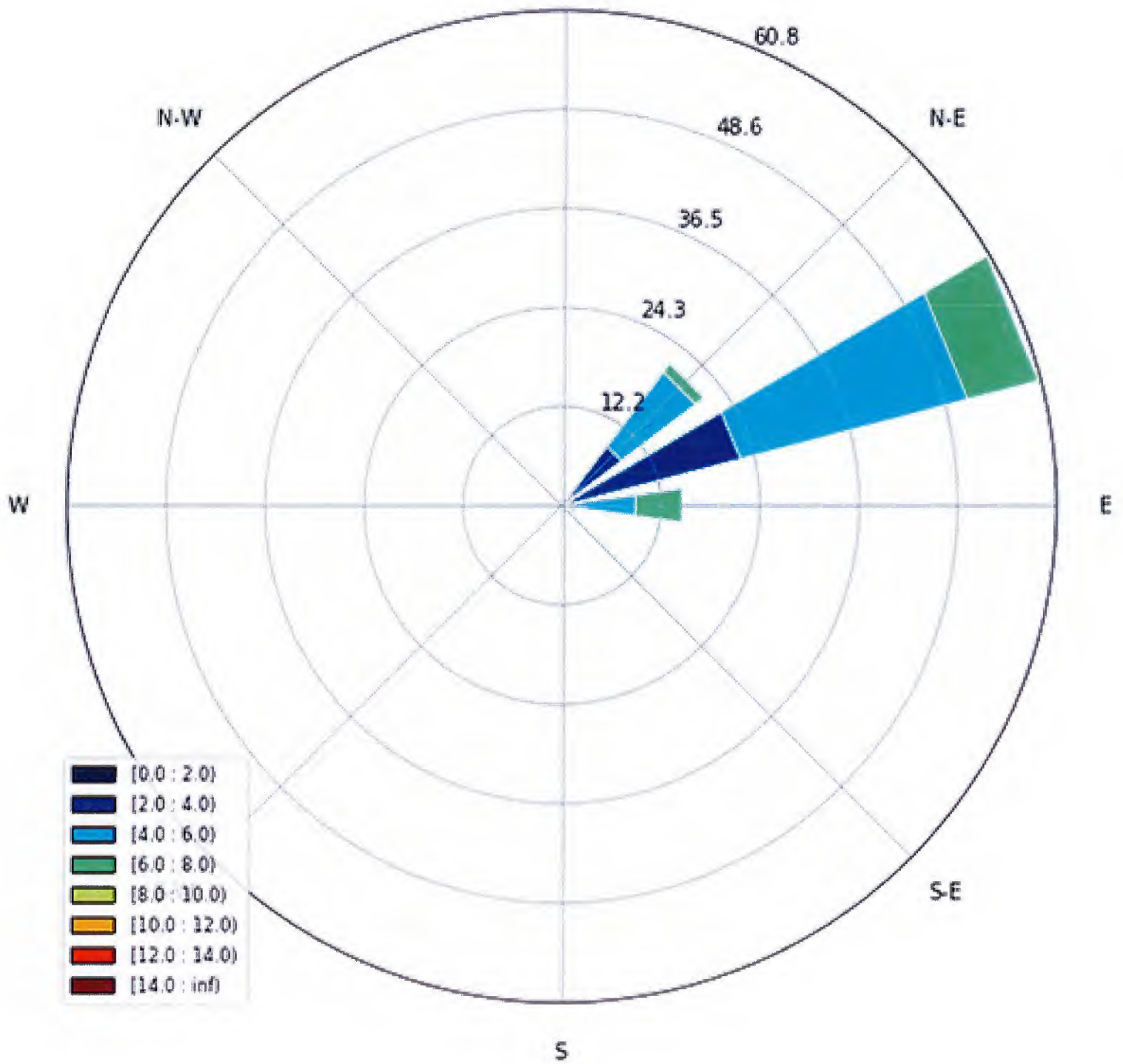




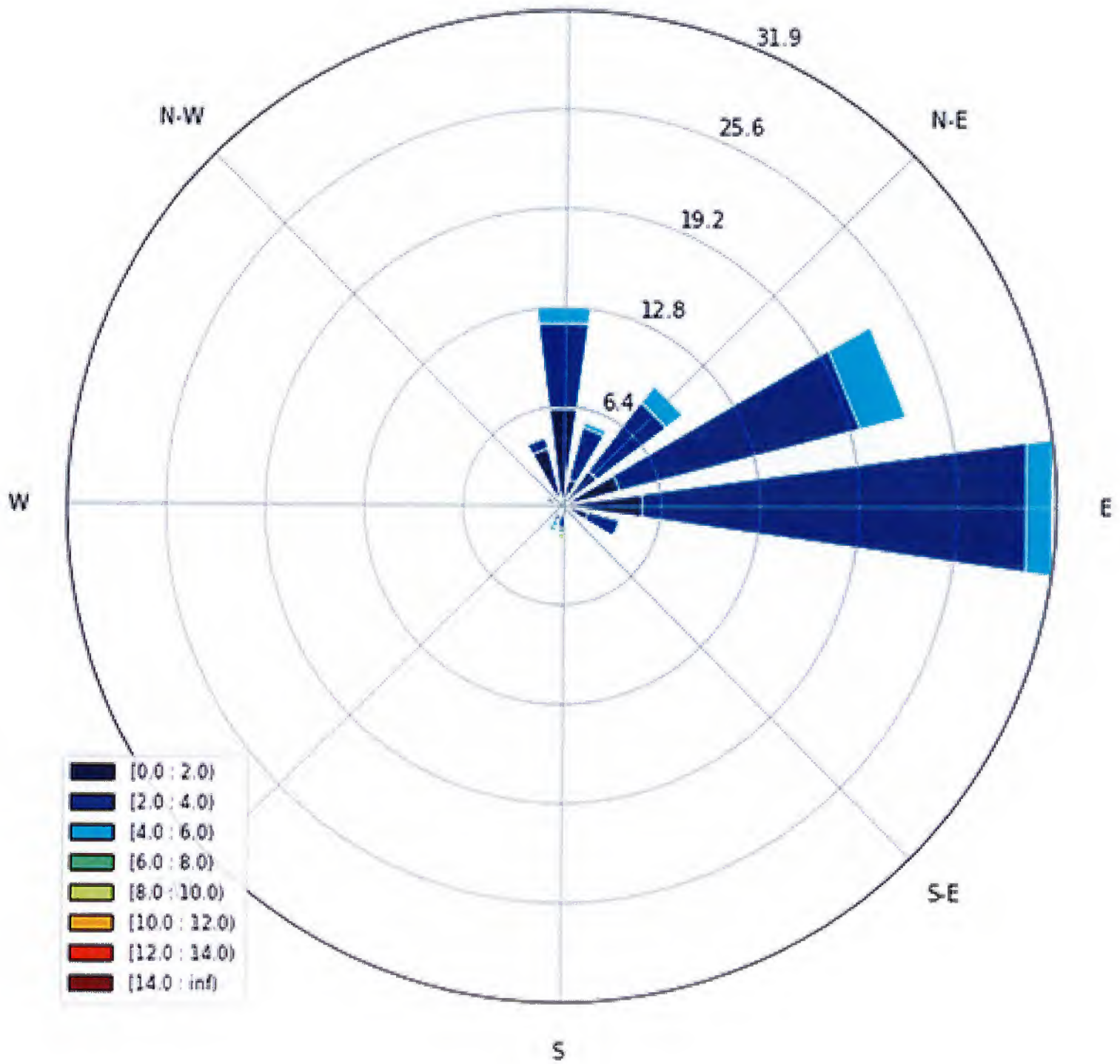
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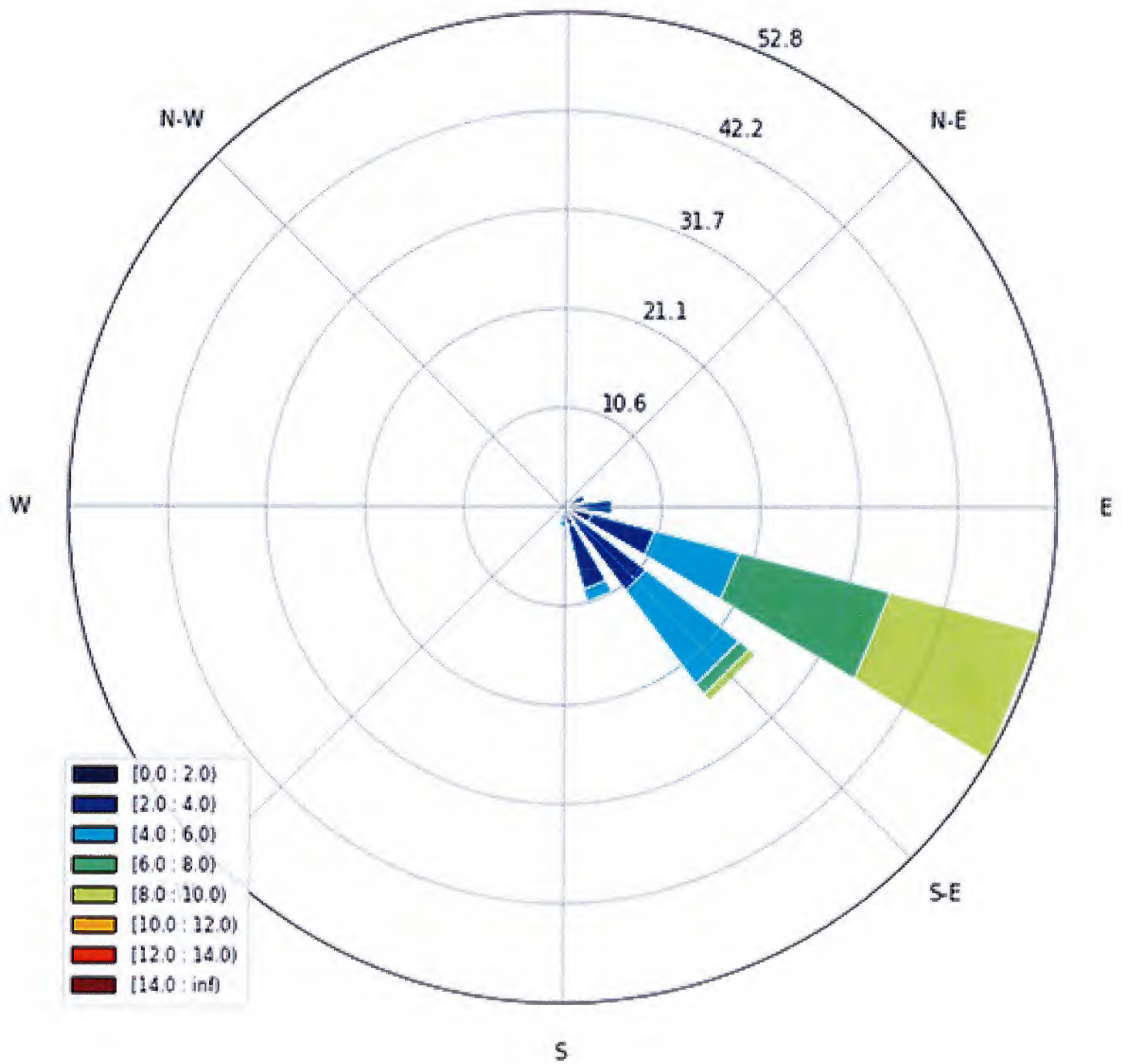


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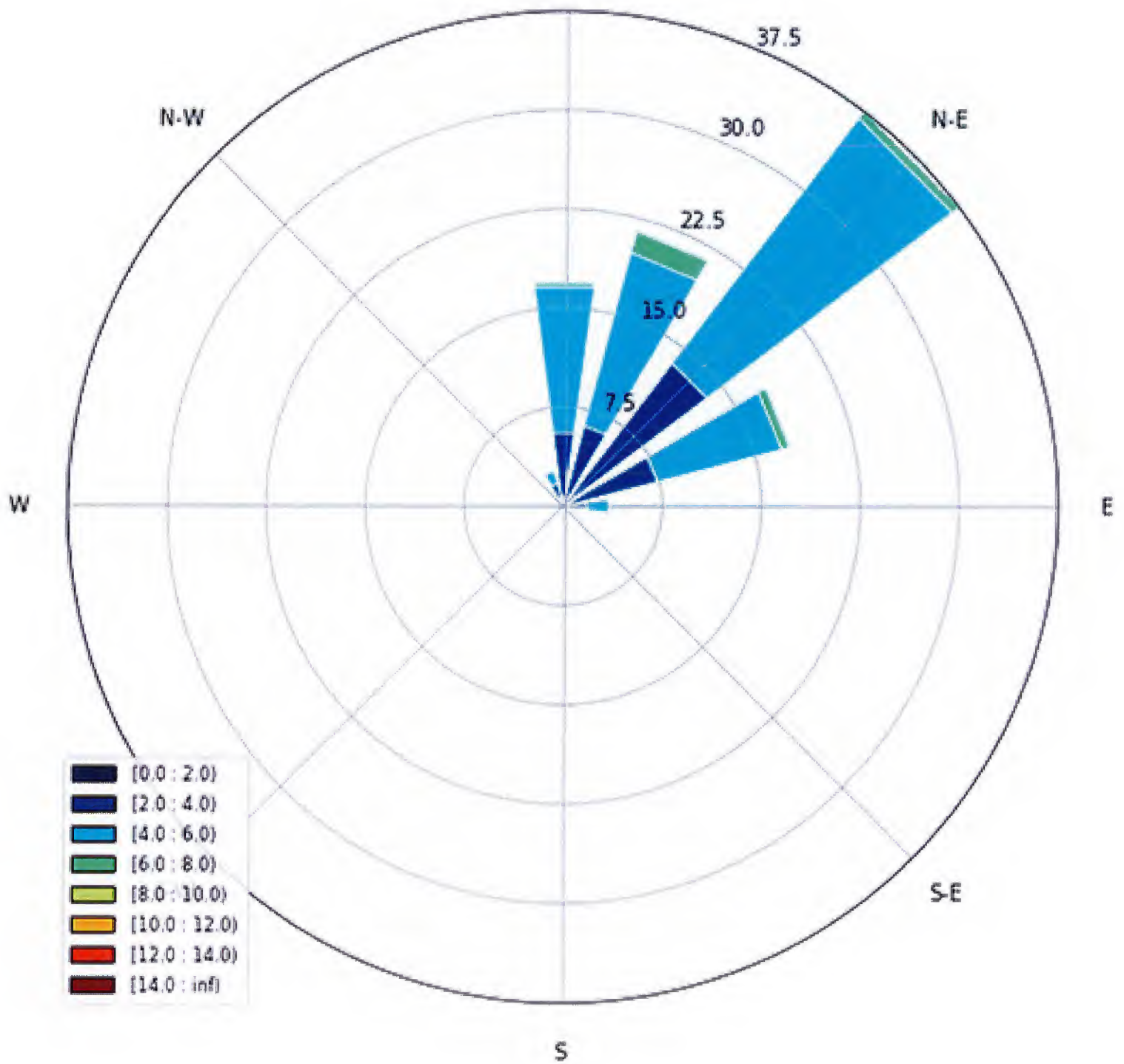




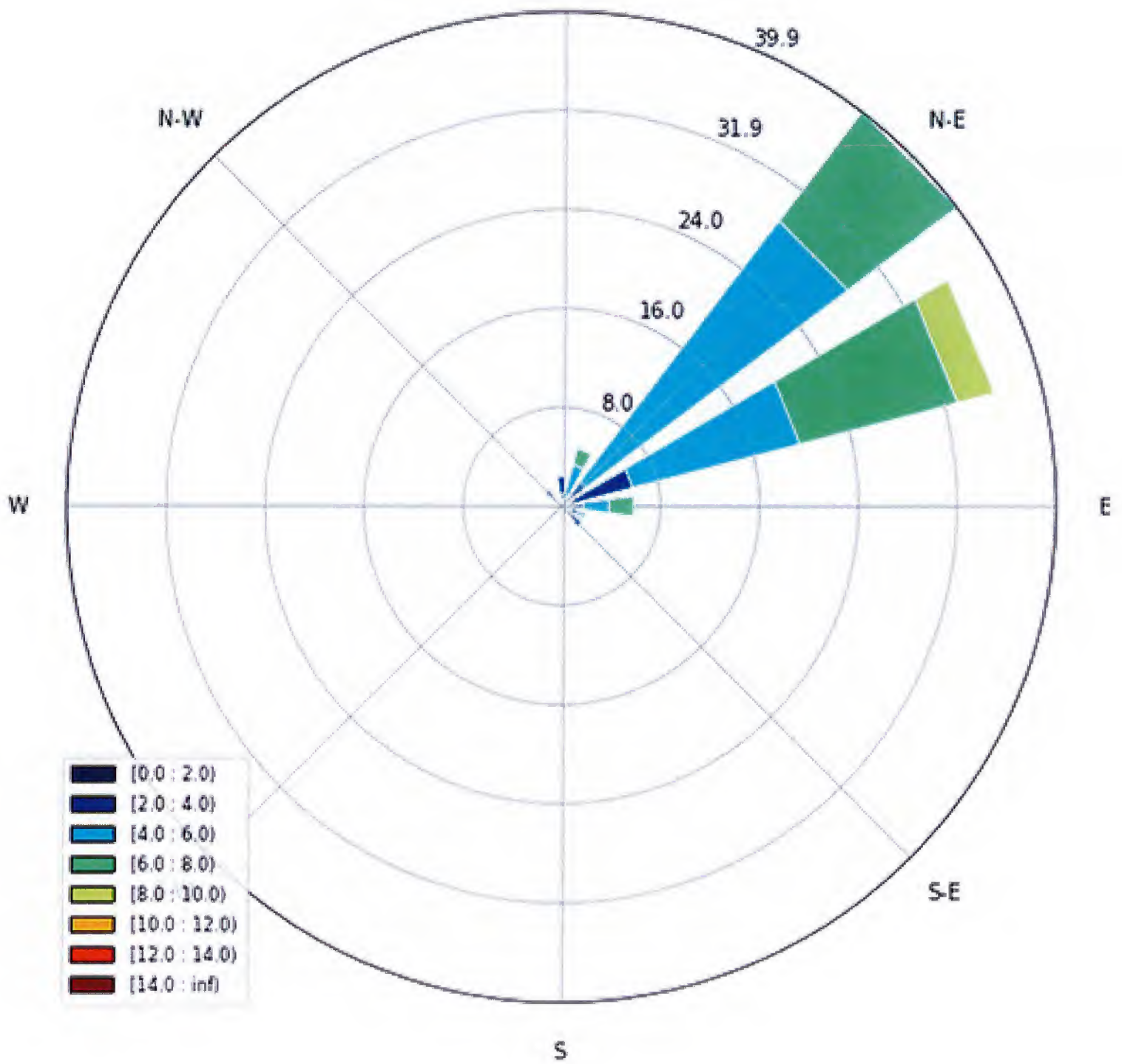
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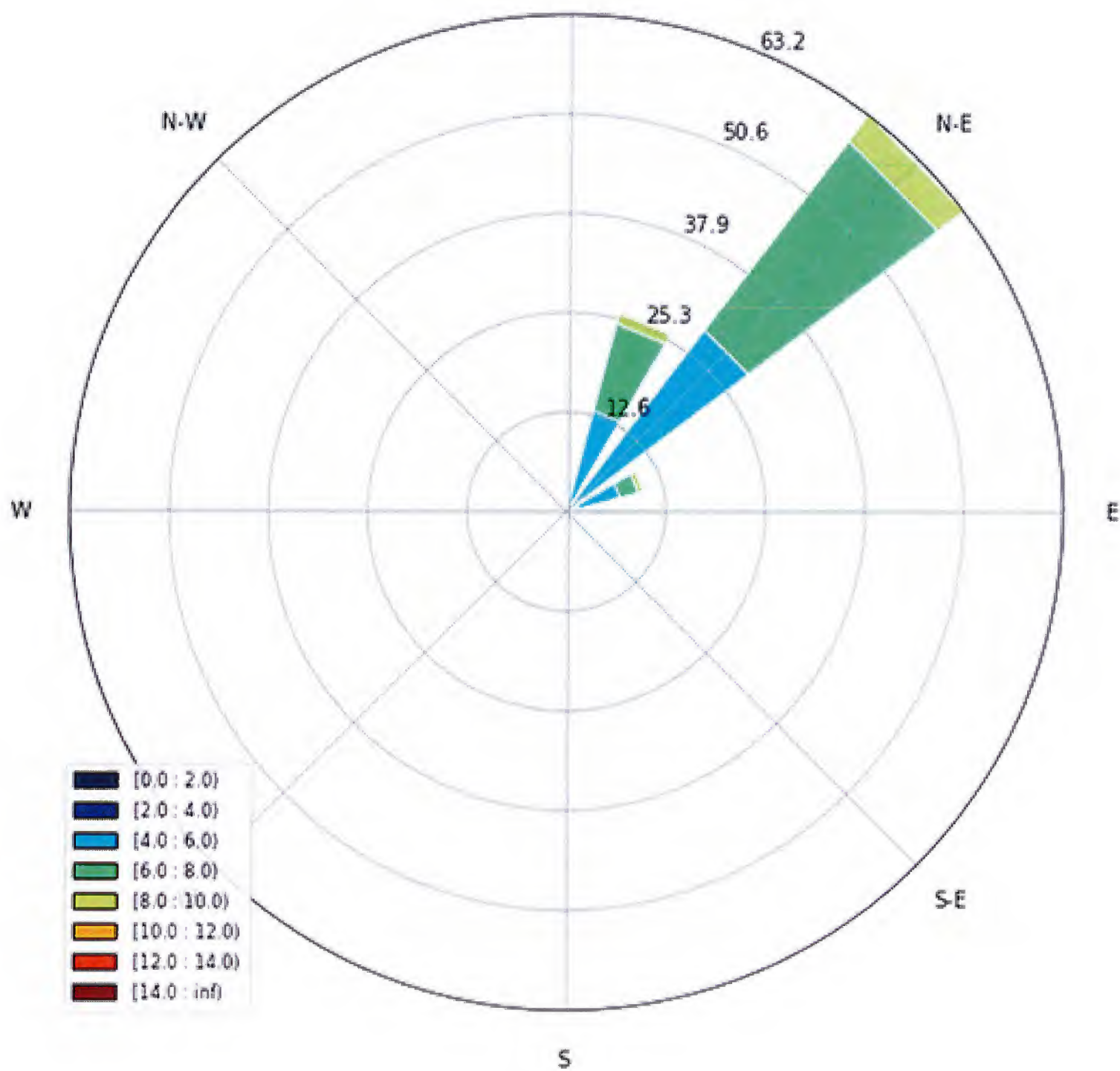


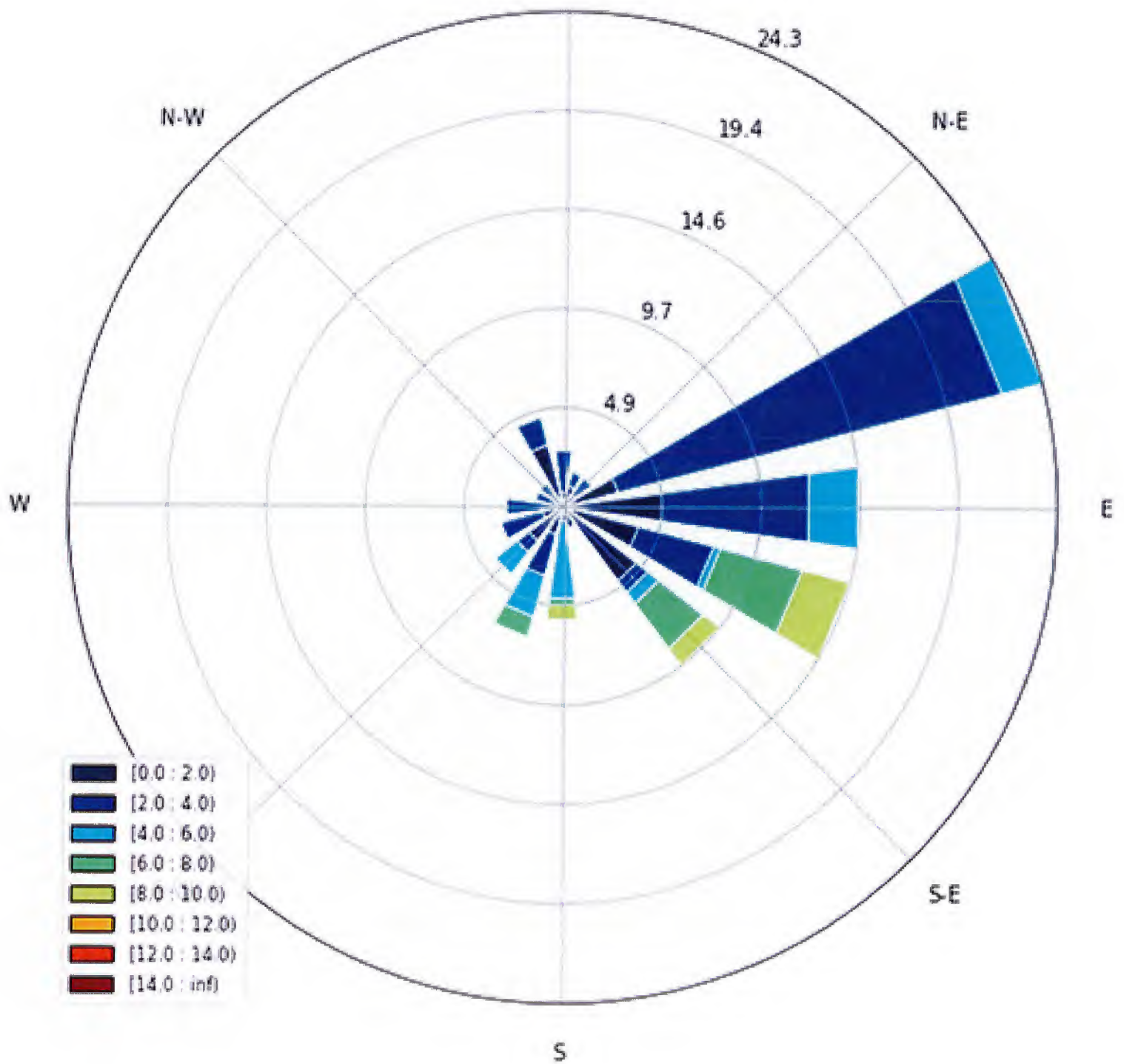
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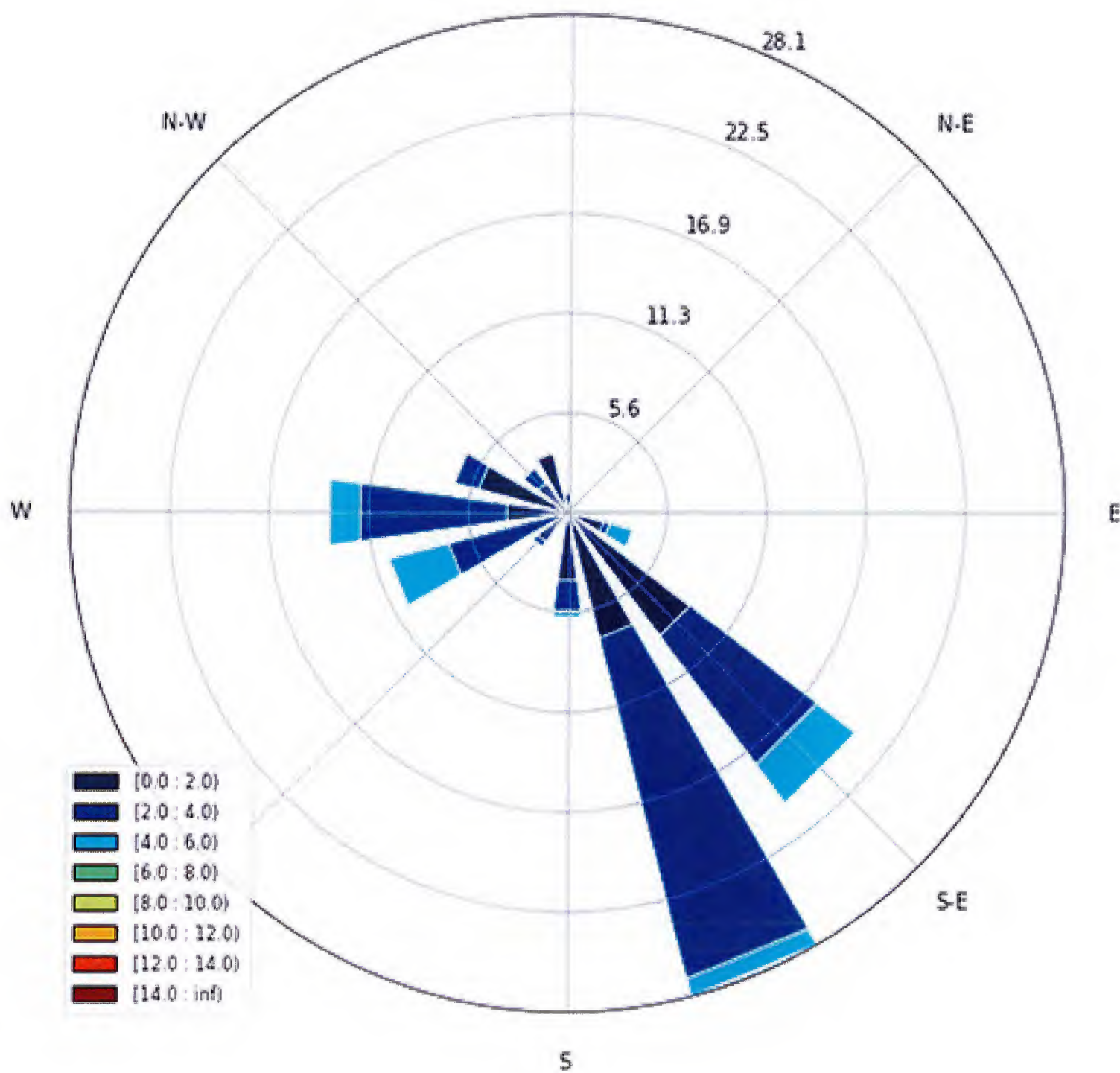


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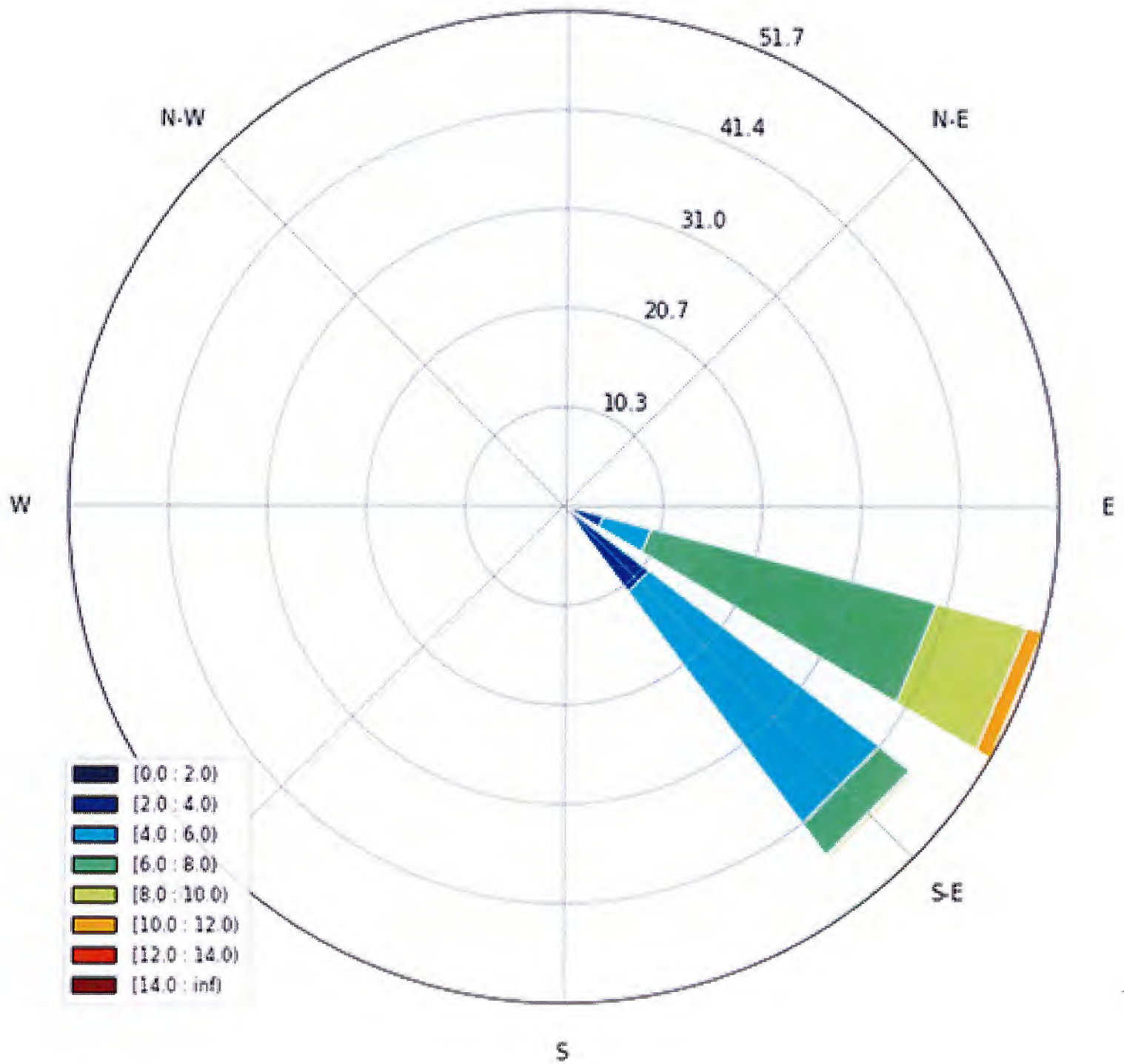


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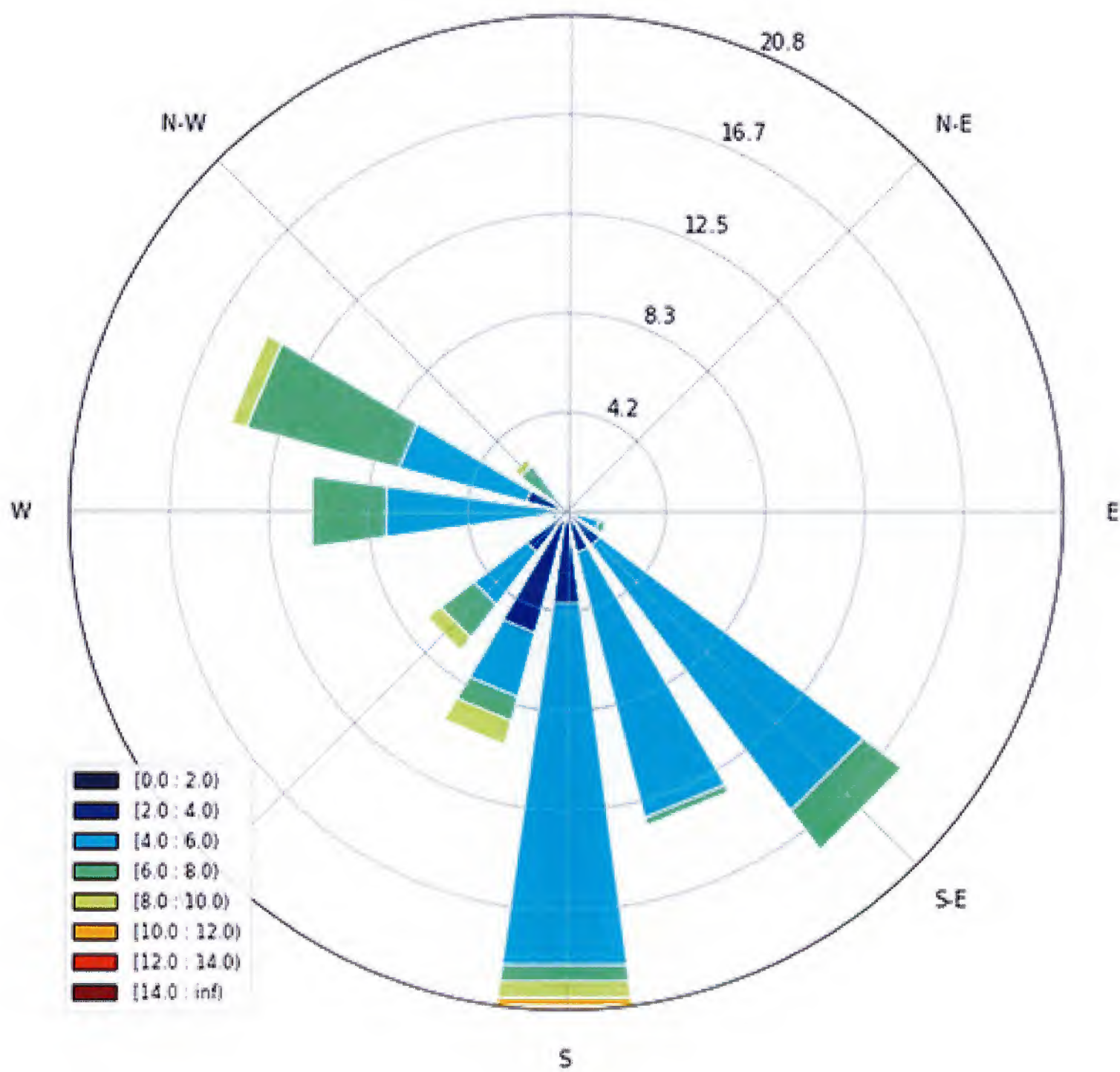




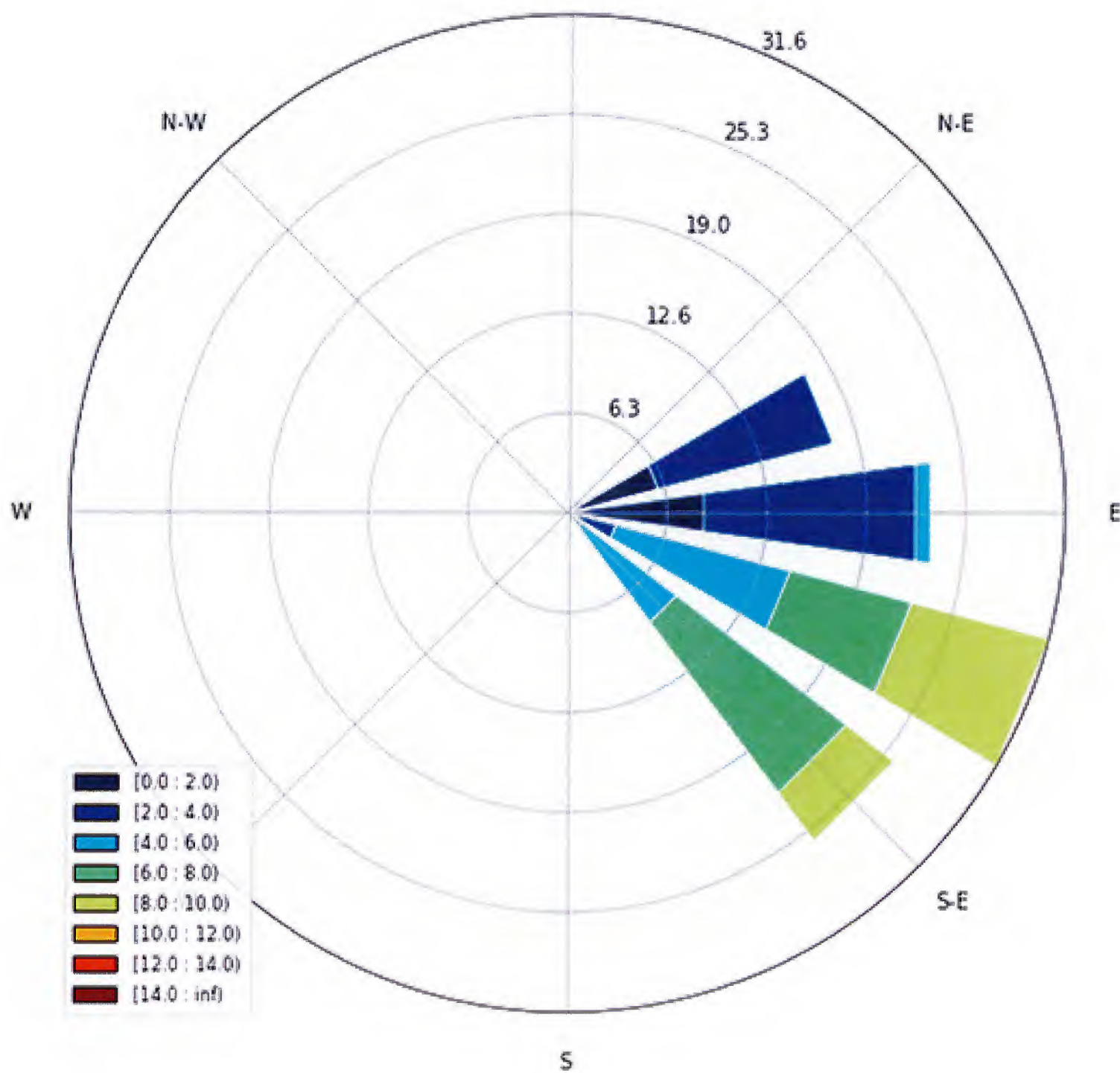
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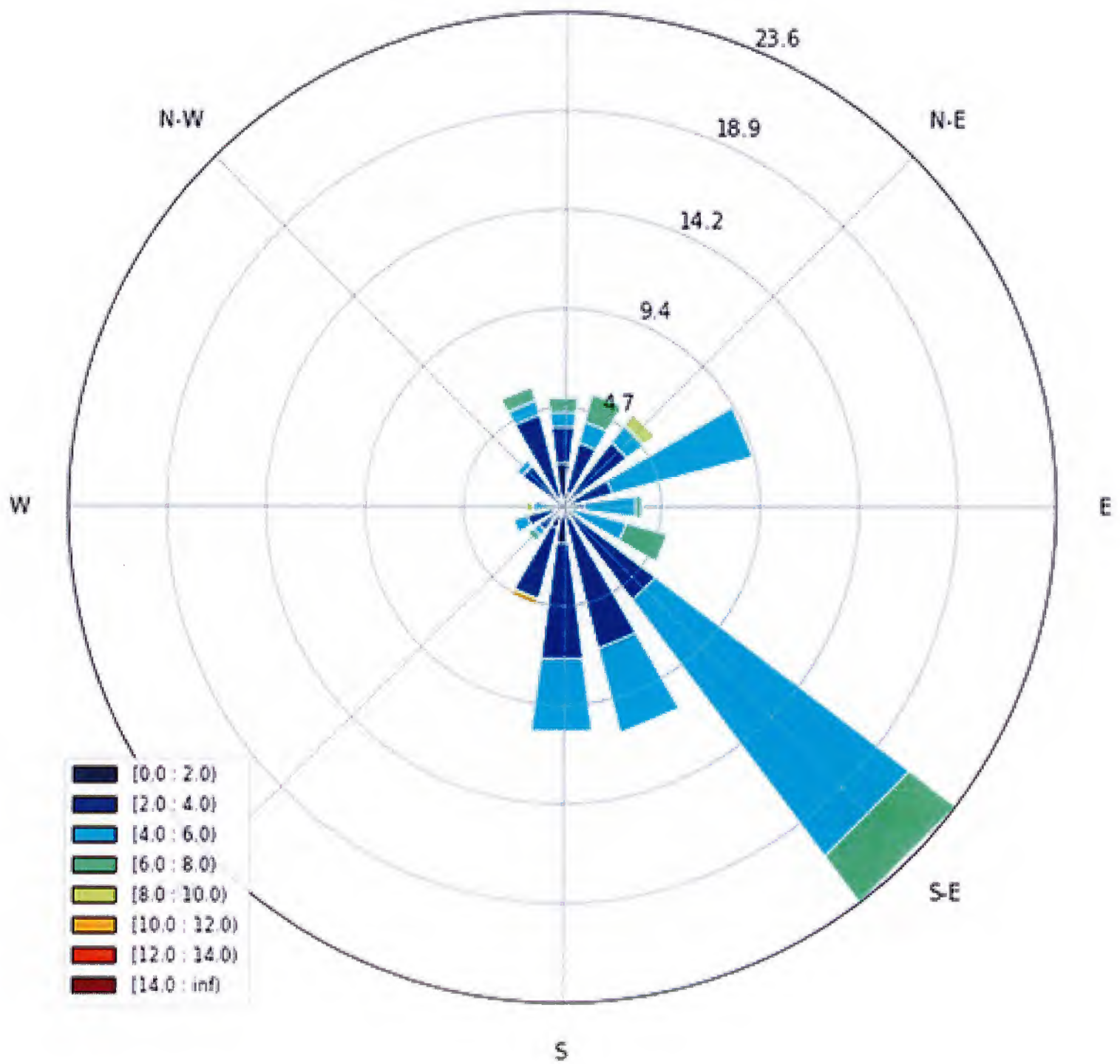


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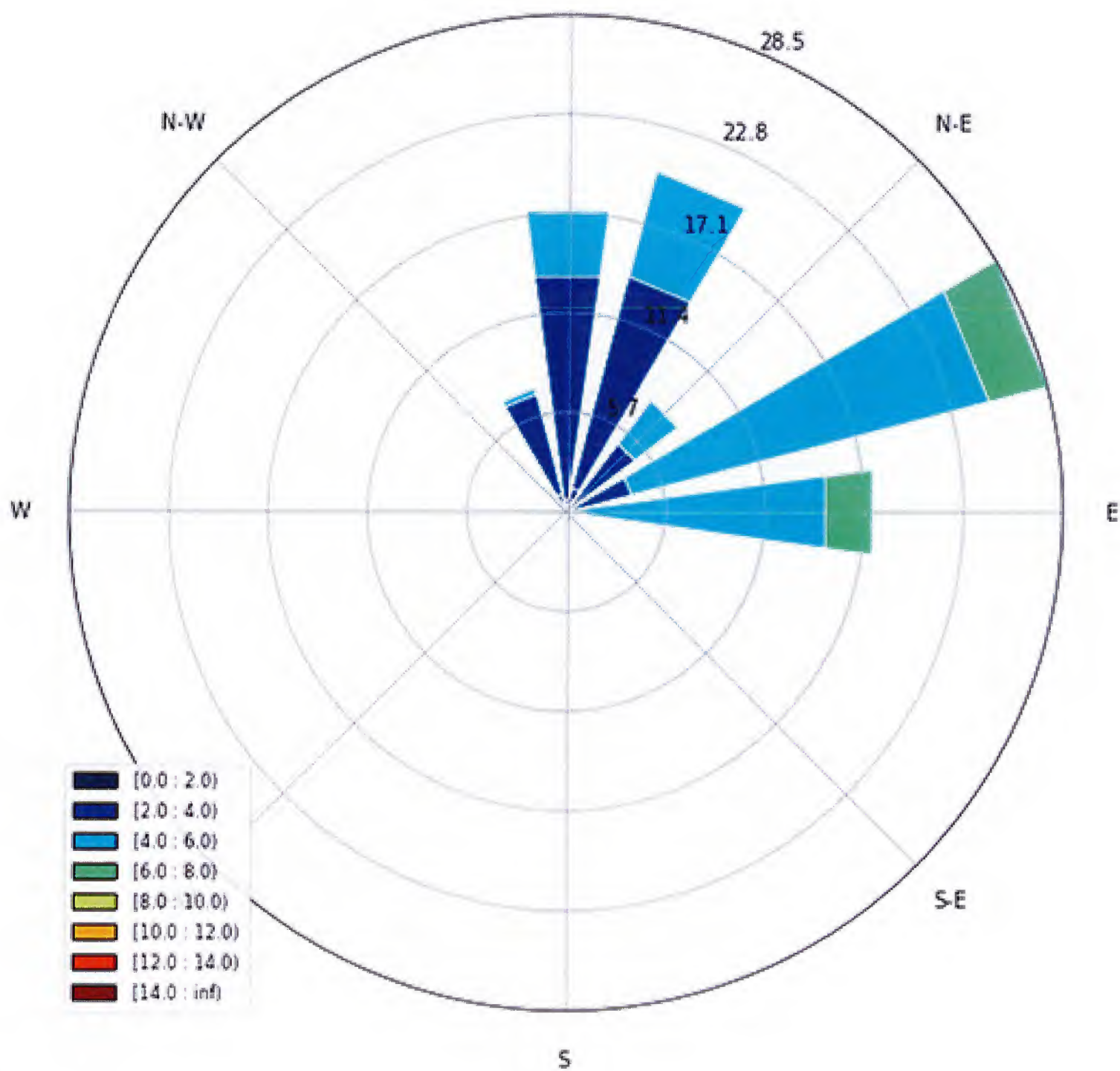




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FPC: Sep 28 2018



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